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ABSTRACT

Presented are proceedings and materials from a special study institute (1973) designed to provide classroom teachers of trainable and educable mentally retarded, physically handicapped, deaf, blind and learning disabled children with information on outdoor education for handicapped children. Explained are program objectives such as demonstrating how the outdoors can be used to expand existing curriculum areas and familiarizing participants with a wide range of instructional materials available for use in outdoor education programs. Information from workshop sessions includes suggested activities in the areas of human relations in the out-of-doors, arts and crafts, science and nature, social studies, and outdoor (school ground) games. A major portion of the document consists of a sample computer-based resource guide which provides lists of activities, materials, and measuring devices related to specific objectives (such as building a fire) for both groups and individual students. Reported are results of participant evaluations of each workshop, and appended are forms, menus, and other information on the institute. (LS)

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OUTDOOR EDUCATION FOR THE HANDICAPPED

PROCEEDINGS

from

THE SPECIAL STUDY INSTITUTE

November 14, 15, and 16, 1973

EC073239

RESEARCH AND DEVELOPMENT COMPLEX

Faculty of Professional Studies

State University College at Buffalo

E 2

OUTDOOR EDUCATION

FOR THE HANDICAPPED

THE UNIVERSITY OF THE STATE OF NEW YORK

The State Education Department
Division for Handicapped Children

Special Education Instructional Materials Center

in cooperation with

Research and Development Complex
Faculty of Professional Studies
State University College at Buffalo

presents

"OUTDOOR EDUCATION FOR THE HANDICAPPED"

November 14, 15 and 16, 1973

"Whispering Pines"
Franklinville, New York

Special Study Institute

Funded through Section 91-213

Education of Handicapped Act

PREFACE

The following proceedings represent an attempt to provide classroom teachers with information and experiences helpful in meeting with the needs of handicapped children through the outdoor education approach. The institute represented the combined talents of people familiar with both the needs of the handicapped and the concepts of outdoor education.

Participants were selected to represent areas of the handicapped, including trainable and educable mentally retarded, physically handicapped, deaf, blind and learning disabled children. The program format was designed to create outdoor experiences as they would be conducted with a group of handicapped children. The facilities of "Whispering Pines", the State University College at Buffalo Camp, were used to further enhance the outdoor experiences of the participants. The combination of participants, program and facilities resulted in a stimulating and informative institute, as described on the following pages.

These proceedings represent a summary of the sessions offered and a sample of the materials provided by the consultants.

It is hoped that these proceedings will provide the reader with information and ideas for implementing an outdoor education program for handicapped children in their school district.

Ralph R. Dykstra, Institute Coordinator
State University College at Buffalo

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PURPOSE

Purpose:

The Institute was designed to provide participants already involved in conducting outdoor education programs an opportunity to share their experiences and to further explore ways to integrate the principles of outdoor education within prescribed state curriculum syllabi.

Program:

The Institute focused on the following area and techniques:

To further sensitize the participants to the importance of outdoor education by demonstrating ways in which the outdoors can be used to expand existing curriculum areas.

To accumulate a number of practical comments from the participants as to the applicability of outdoor education with all handicapped children.

To reinforce the commitment of the participants to individualize instruction through a wide use of activities, materials and approaches in the instructional process.

To familiarize participants with a wide range of instructional materials available for support of outdoor education programs.

To introduce the participants to the Computer-Based Resource Unit (CBRU) in outdoor education.

PLANNING COMMITTEE

NEW YORK STATE EDUCATION DEPARTMENT

Division for Handicapped Children

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Special Education Instructional Materials Center

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Department of Student Teaching

Herbert Foster, Director

FOREMAN CENTER SATALLITE SCHOOL

Geraldine Navratil, Teacher

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Mrs. Geraldine Navratil, Teacher
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West Webster, New York

Miss Bonnie Sommer
Instructor, Outdoor Education
State University of New York at Buffalo

SPECIAL STUDY INSTITUTE

ON

OUTDOOR EDUCATION FOR THE HANDICAPPED

Program Format

Wednesday, November 14, 1973 "Whispering Pines", Franklinville, New York

12:00 Noon — Registration

1:00 P.M. — Workshop Session 1 General Session

Institute Orientation

2:45 P.M. — Introductory Remarks

Dr. Kenneth A. Cross, Acting Director
Research and Development Complex
State University College at Buffalo

Dr. Robert B. Simpson, Dean
Faculty of Professional Studies
State University College at Buffalo

3:00 P.M. — Workshop Session 11

Human Relations in the out-of-doors

5:00 P.M. — Dinner Activities

Food Preparations, etc.

8:00 P.M. — Workshop Session 111

Guest Speaker

Dr. James Gillette
Professor of Recreation and Parks Administration
Director of Fancher Campus
State University College at Brockport

Group Outdoor Education Skills Activities

Thursday, November 15, 1973

8:30 A.M. — Breakfast

9:30 - 10:30 A.M. — Workshop Session 1V A

"Outdoor Education Skill Areas"

Arts and Crafts (Group A).....Ralph Dykstra

Science and Nature (Group B)..Bonnie Sommer

Social Studies (Group C)..Geraldine Navratil

Outdoor Games (Group D).....Herbert Foster

V1

10:45 - 11:45 A. M.	Workshop Session 1V B
	Rotation of Groups A, B, C, D
12:00 - 1:15 P. M.	Lunch
1:30 - 2:30 P. M.	Workshop Session 1V C
	Rotation of Groups A, B, D, C
2:45 - 3:45 P.M.	Workshop Session 1V D
	Rotation of Groups A, B, C, D
3:45 - 7:00 P. M.	Preparation for dinner
	Dinner
8:00 P. M.	Planned Evening Activities

Friday, November 16, 1973

5:30 A. M.	Early Morning Walk (Optional)
8:30 - 9:30 A. M.	Breakfast
9:30 - 11;30 A. M.	Workshop Session V - General Session
	1. A Look at Outdoor Education Programs
	2. Resources Available in Outdoor Education
	3. CBRU - It's In To Be Out
11:30 - 1:00 P. M.	Lunch
1:00 - 2:30 P. M.	Closing Session and Evaluation
2:30 P. M.	Adjournment

INSTITUTE PARTICIPANTS

NAME	REPRESENTING
Mr. Richard L. Bailey 710 Eggert Road Buffalo, New York 14215	Buffalo Public Schools
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Rockland BOCES

Ms. Frances Wituszynski
Syracuse State School
P. O. Box 1035
Syracuse, New York 13201

Syracuse State School

Mrs. Florence L. Wood
13 Dodd Street
Whitesboro, New York

Oneida/Madison/Lewis BOCES

An enthusiastic group of participants prepares for three days of intensive outdoor education activities.

ESTABLISHING GROUPS

DR. HERBERT FOSTER

The nature of this institute required that the participants get to know one another as soon as possible and that they establish a rapport with each other and their group. It was also important that the participants be grouped for subsequent activities.

In order to accomplish the above goals, each participant was requested to complete the information on the card below, at the time of registration.

SPECIAL STUDY INSTITUTE
on
OUTDOOR EDUCATION FOR THE HANDICAPPED

Name_____

School District_____

In the spaces below, write three (3) adjectives which describe you:

1._____

2._____

3._____

During this activity, which had as its primary purpose the establishing of groups, each of the participants had his or her card pinned to their clothing. He then attempted to find another participant who listed similar adjectives to describe himself. When this was accomplished, the two set out to find a third person who had listed adjectives similar to theirs. This continued until three different groups had been established. The groups then sat down and each participant in the group said something about himself--where he teaches; the handicapped children he teaches; etc.

This activity served the dual purpose of grouping the participants and introducing them to each other.

GREETINGS

DR. ROBERT B. SIMPSON

It is my pleasure to welcome you to this Special Study Institute which is sponsored by the Division of the Handicapped Children and Youth of the State Education Department through the State University College at Buffalo, by the Research and Development Complex.

I know that staff from our own college, from the State Education Department—from the State University at Buffalo, and from a number of school districts have been actively planning this Special Institute for some time, and judging by the plans for the institute, I really wish I could attend. In an institute such as this, of course, one vital factor is the weather. I am not authorized by either the State Department or the college to make guarantees in this regard, but Ralph Dykstra assures me that arrangements have been made (he neglected to say with whom) for the weather to be fine.

The concept of outdoor education as I understand it is not new. But during the past few years it has come to take on a vastly different and expanded scope. Outdoor education at its best is no longer a haphazard series of nature walks with relatively undefined purposes but it is regarded as a carefully sequenced series of activities designed to achieve highly relevant educational goals.

A number of factors have contributed to this change. The most obvious factor is our expanded recognition of the need for improved efforts at environmental conservation. As students become increasingly aware of the value of the gifts of our environment, it is hoped that they will become increasingly concerned about their part in the conservation effort.

But an equally important reason for the expansion of outdoor education has been the recognition that such experiences can contribute substantially to individual growth and development. This applies not only to physical development, but also intellectual and emotional development. In particular, outdoor education can be of value in helping an individual to develop self-confidence, initiative, determination, and a confidence in himself and his environment.

These are what I consider to be some of the most important goals of education. To the extent that this institute helps you in improving the achievement of these goals by students, the time will be very well spent.

Trust is the main objective of the Blind Walk. . . . . .

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WORKSHOP SESSION II

HUMAN RELATIONS IN THE OUT-OF-DOORS

Ralph Dykstra, Herbert Foster
and Geraldine Navratil

Working with children in the out-of-doors offers an excellent opportunity for teachers to help children develop a sense of trust and teamwork or group cooperation.

During this workshop session, the following three activities were used as examples of how teachers can provide opportunities for children to develop trust, leadership, and team spirit.

BLIND WALK

Blindfolded group is guided to some destination to accomplish some simple task by unblindfolded member of the group.

OBJECTIVE --- Trust

TEN ON A SPOT

Ten people get on some spot all at once.

OBJECTIVE --- Group task - pre-thought as to the best way to achieve goal - emerging leadership and togetherness - Breaks ice!

THE ELECTRIC FENCE

The task is to cross over a rope that is stretched between two trees (about 10 ft. apart) at a height that will provide a reasonable amount of difficulty (4 to 5 ft). It should be explained that the rope is the top of an electrified fence with a field to the ground and extending to the trees. The rope or trees may not be touched. The group is given a strong board 6 or 7 ft. long to help accomplish the task.

OBJECTIVE --- To provide a difficult task that will call for group problem solving, leadership development, and cooperation.

. . . . . .while group cooperation is required for achieving success during the Electric Fence activity.

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WORKSHOP SESSION III

Dr. James Gillette

During this workshop session, Dr. Gillette informally shared ideas and experiences about outdoor education programs for handicapped children. He encouraged the use of the many facilities available throughout our State and National Park Systems. Some of the highlights of Dr. Gillette's workshop session are summarized below.

GROUP OUTDOOR EDUCATION SKILLS ACTIVITIES

"It is very well to say that the environment is a total system including the natural, the cultural, and the perceptual; there is no doubt that this system is a dynamic process. It follows, of course, that education must be student centered, curriculum integrative, interdisciplinary, and personally involving.

---The environmental Strands are used by the National Park Service as a framework for open ended, process oriented environmental education.

---The strands are not non ideological. That is, they do not support any monolithic theory of the universe. They are intended to facilitate process, not to dictate the kind of form it will take. Although the Strands do not assert a structured ideology, they do assert that the world is process. To the extent possible within a world of process, they are constants.

The Strands are flexible because they are interdisciplinary perceptual/ conceptual tools which can be applied to all things within the total environment.

The environmental Strands are: Variety and Similarity. The differences and likenesses which occur among all living and non living things, conditions and states.

Patterns. Systems or perception of systems of structure, function, behavior, and design of things living and non living, physical and abstract, cognitive and affective.

Interrelation and Interdependence. The dynamic of relationships and relativity which exists among all things.

Continuity and Change. The dynamic of form in time which exists among all things.

Evolution and Adaptation. The process of survival or the failure to survive of all things, in terms of time (continuity and change), and interaction and relativity (interrelation and interdependence)."

National Environmental Study Area: A guide
U.S. Department of Interior
National Park Service
U.S. Government Printing Office
1972
Page 28

There are a number of interesting things happening at the present time in our Camping on a national level. The park philosophy has changed tremendously and teachers should consider getting into the parks during the off seasons. The park service people are encouraging campers to use the parks during this time because their budgets, like our school budgets, depend upon use. If they increase the number of people who use the facilities during the year, they can then request more money.

The encounters that occur as a result of getting into a park system are usually quite good. You will meet people there that we think of as a community in itself. The parks have garbage pick-up, they have sanitary facilities, they have their own fire department and their own ambulance. They also have their own cartographer, so if we are going into the park for map making or orienteering, we'll have a cartographer with us. In addition to the facilities and personnel mentioned above, the parks have their own conservationists and forest men. So, there are some facinating potentials here. Think that this is inter-disciplinary; it isn't just one thing. Usually, when we think of outdoor education, we think of recreation, physical education, or the whole area of field biology, but, it's a lot more than that.

I had a little math experience recently which I would like to share with you. With a group of sixth graders, we did a study of the flood plain in the Genesee River Valley Basin. We found that the first record of flood in that area was kept in 1785. Then we found all the other flood years for a hundred and seventeen year period, up to about 1902. The youngsters figured out the difference between the flood years and discovered that there were 14 major floods that occurred during that 117 year period. Then I asked, "How often does the

flood plain flood?" They divided and discovered that there are major floods on our flood plains of all major rivers in the United States and Canada every seven years. This was a lesson that they had to learn by themselves and I don't think they are going to forget it! One thing that I'm quite certain of is that the first hand experience is often retained longer; it's a more sensitive kind of thing. It involves them, not just the person doing the lecturing or trying to do "teaching".

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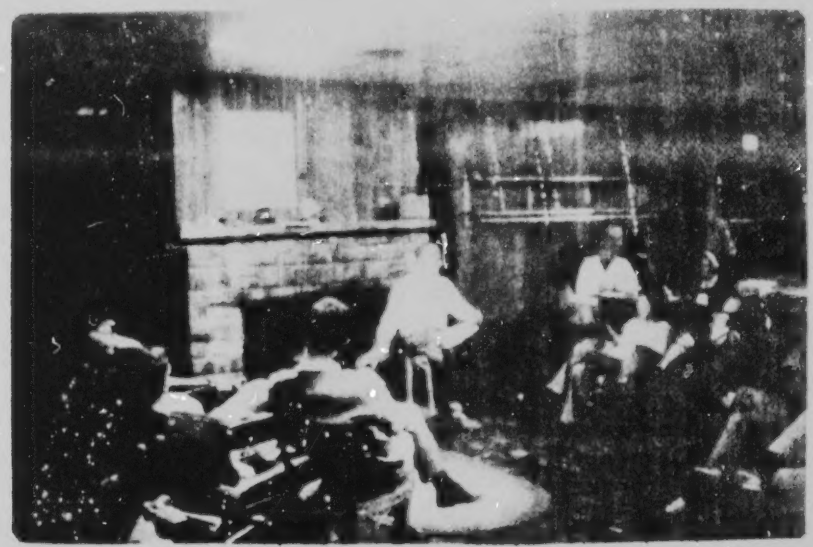

A fire in the lodge fireplace provided a warm atmosphere for Dr. Gillette's informal evening session.

When working with children in the out-of-doors, you should always have an alternate plan-in the event of emergencies. Today we had a young man find out what it means to get wet! He fell into the pond at the Glen Irin Inn, in Letchworth State Park while his group was dashing around looking at the goldfish. Right away I said, "Are you cold?" He said he was freezing! A wind was blowing so I said, "Why do you suppose you are so cold?" He responded, "Posing for this photographer!" So you see, things happen sometimes funny but always spontanious, which call for an alternate plan.

What happens when you are out in the field doing a pond study, trimming trees, doing a conservation study or something of that nature and the rains come? None of our children are so sweet that they'll melt if they get wet! On the other hand, you'll hear about it from the administration if 16 of the 18 children in your group go home with a cold. Always be prepared in one way or another. If it looks like rain, or it might happen while you are out there, have ponchos along, or be close enough to the building so you can get back in a hurry. Then, go to some alternative plan. Too many of us are single minded in the subject area that we are concerned with and all we think about is reaching those goals or hitting that behavioral objective; "I want the kids to be able to do this when I get back."

Get them involved in real things, too. Many of our learning disabilities children are that way because they are stiffled by the fact that they are in a room; that they have an authority-you; that they have to do book work which causes them to be "edgy", etc. So, you get them into the out-of-doors. Don't stop taking the books along because they will be of value to you. None of us can name everything out there! I've seen kindergarten children go wild over holes in the ground! "I'd say, "Oh, look! There's a hole. What do you suppose lives in there?" Well, the first thing you know, you've got 30 kids sticking their fingers in the hold and you hope there aren't any rattle snakes in that vicinity! You start looking up! What does burrow? What are our burrowing animals and insects? I don't have all that in my head! I do like to ask the, though, "Did a snake dig that hole?" (A snake doesn't have the equipment to dig a hole.) Have them doing things. One of the programs I ran a few years ago was one where 25 physically handicapped children partidipated in a tree planting exercise. They planted 500 evergreen trees. Those children still return to the campus with their parents and want to see their trees! There are a lot of things that can happen in the out-of-doors and they provide facinating experiences for handicapped children.

About three years ago, the National Park Service studied and have established "environmental study areas." There are a number of these NESA sites throughout the United States. If you are interested in establishing an environmental study area, the National Park Services will give you an application and a guidebook. If you have a five acre tract of land next to or behind your school, or if your school system has some properties or land which needs some reforestation, you may wish to look into this program. It is a great opportunity and can open up some doors for funding which is available through some of these projects. In order to become a site, you must have a class and a study plan; a curriculum plan.

We are often asked, "What is wrong with teaching manipulative skills?" "What's wrong with our using our hands?" The answer to these questions might be that the age of specialization is quickly eroding away - it's going. The age for generalists is returning. We have been spending too much time in the aura of spectatorship and now we have got to begin moving back down to participation. The only way I know to do this is through the educative role. There is nothing else that will do it! There's no moral or ethical responsibility to become a participator.

In order to illustrate the possibilities for group learning in the out-of-doors, Dr. Gillette divided the institute participants into groups and assigned a task to each group to be accomplished out of doors and reported back. Three of the group tasks are reported below.

TASK: Record a series of events where the first is related to the second, the second to the third, the third to the fourth, etc., but the last event seems to have no causal relationship to the first event.

GROUP RESPONSE: The first event is that the earth is rotating on it's axis; the second is that there are seasons, and with the seasons there is winter. Where there is winter, there is frost and where there is frost, moisture freezes inside boulders. When this happens, little rocks break off, which has no relationship to the first event which was that the earth rotates on it's axis.

TASK: Find evidence of a good change, a bad change, and a change that is neither good nor bad.

GROUP RESPONSE: Good change - trees grow, get big, drop leaves and put nourishment back into the soil.

Bad change - there is erosion taking place which is wearing away the soil along the edge of the road.

A change which can be observed but which cannot be determined whether good or bad is that the stars above us are burning out.

TASK: Find evidence of a population of something.

GROUP RESPONSE: Deer and other tracks indicate that the area is inhabited by animals. Another thing found was a rock with fossil forms imbedded in it which would indicate a population of an earlier age.

This was a kind of a fun and games experience which served well to illustrate various learnings through group activities in the out-of-doors. There are a good many others. There are thousands of things that can be done by children that would interest them and they are not just sitting there with a pencil and a piece of paper, but doing something.

WORKSHOP SESSION IV

OUTDOOR EDUCATION SKILL AREAS

ARTS AND CRAFTS

Ralph Dykstra

Many useful as well as decorative items can be made from things found in nature and out-of-doors. Below are listed just a few such activities which can be used with handicapped children in the area of arts and crafts using materials from nature.

During this workshop session, materials were available for participants to try out some of the arts and crafts ideas listed.

Table Decoration. Before each meal send out two students to gather materials for a centerpiece for each table. Stress conservation. Moss, mossy logs, driftwood are pretty and it would be less disturbing to nature to choose them than wildflowers and ferns.

Casting Animal Track. Materials - Half pint milk cartons, plaster of paris and water. Cut the top and bottom out of the milk carton. Put the milk carton over the animal track, mix some plaster (see directions on package) and pour into the milk carton. Allow to dry 15-25 minutes. Remove the carton and you have a permanent record of this animal. The cast track also makes an interesting paper weight.

Leaf Designs. Bleach colored paper to show leaf designs by placing in the sun with the leaves on it. Exposure (several hours) will lighten the paper and after removing the leaf, the once covered area will remain darker.

Gather various types of seeds (i.e. acorns, milk pods, burrs) and use to make a collage. Identify the materials used.

Survival Crafts. Make eskimo goggles. Cut out some birchbark to fit over eyes. Use only bark which has fallen off tree. With pocket-knife or razor, cut narrow slits for eyes. Punch holes in sides and use string to tie on glass.

Preserving Leaves. Peel off one layer of a two ply tissue. Arrange leaves, flower, and other items picked up from a nature hike. Arrange on piece of wax paper. Put the tissue over the arrangement, making sure all of it is covered. Using a half-and-half mixture of water and Elmer's glue, dab the tissue with a paint brush until it is well saturated. It will dry clearly, showing the mounted articles.

Put nature items in a bag or box, different kinds of leaves, etc. Have the children find matching items on the hike.

Arrange distinctively shaped leaves on a piece of construction paper. Using a can of spray paint (a color which will show up well on the paper) spray the flowers, especially the outer edges so that the same will be discernable when the leave is removed.

OUTDOOR EDUCATION

ACTIVITIES IN SCIENCE AND NATURE

Bonnie Sommer

A. Trees and Shrubs

1. Studying bark patterns, textures, colors.
2. Finding root systems (exposed by erosion).
3. Comparing deciduous and coniferous tree characteristics.
4. Comparing fruits, seeds, buds, leaf scars, leaves.
5. Measuring distance around (circumference) and distance through the center (diameter) with a string tape measure marked off with knots one inch apart.

B. Stumps and Posts

1. Finding decay and insect evidence.
2. Finding clues that show what forces are acting on the stump.
3. Determining the age of the tree when cut.

C. Grass and Other Vegetation

1. Finding effects of people, animals, sunlight, shade, wind, water, etc. on plant growth.
2. Finding locations where plants grow (cracks in sidewalks, school buildings, tree stumps, etc.).
3. Finding effects of plants on erosion and erosion on plants.
4. Studying small, measured plots of ground for strengthening observational skills.
5. Keeping records of the heights of small plants with strips of colored paper by gluing the strips to a piece of cardboard to make a growth graph.
6. Studying the roots of grass and other plants by carefully washing away the soil.
7. Tossing a wire hanger ring to study plants in a lawn.
8. Comparing how seeds travel from place to place.

D. Shadows

1. Marking the position of the shadow on the ground with chalk or sticks. (Note the change in length and position after a few minutes, and hours.) (What causes the shadow to move?)
2. Observing how shadows fall according to the position of the sun.
3. Estimating length of shadow in relation to object casting it.

E. Sidewalks

1. Examining what they are made from and how they are made.
2. Finding plants growing in cracks.
3. Finding wearing away by forces of weather and people.
4. Finding soil washed onto them and determining where it came from.
5. Studying where sidewalks have been placed and where they are needed.
6. Finding where tree roots have pushed up the sidewalk.

F. Animal Life

1. Observing birds, squirrels, insects, etc. (clue charts).
2. Finding animal homes (under logs and rocks, in tree bark, holes in trees, nests, etc.).
3. Finding tracks in mud or snow. Take plaster of paris casts or sketch them.

4. Establishing bird feeding stations near a window. (Simple feeders may be made from pine cones, coconut halves, holes drilled into a small log, or similar containers for suet. Try a mixture of seeds, Crisco, peanut butter, and bacon fat.) Keep records of which birds arrive and when.

G. Weather

1. Comparing cloud formations.
2. Finding wind speed with wind measurer (card and thread) and flag movement.
3. Finding wind direction with balloons and bird feather vane.
4. Exploring little climates (differences in temperature in different places on the ground).
5. Seeing the effect of rain on soil erosion (set up splash boards and water soil with watering can).
6. Tracing rain that falls on the school building.
7. Examining weathering bricks, wood, paint on school buildings.
8. Finding where ice or snow is melting.

H. Soil and Water

1. Comparing size of soil particles. (Shake up soil in a jar of water and let it settle.)
2. Comparing color of soil in different places.
3. Smelling soil to see if it has an odor.
4. Comparing color and moisture of soil from the surface to two feet deep (use a soil auger).
5. Finding out how fast water soaks into the ground at different places (use a bottomless tin can sunk in ground).
6. Comparing erosion at different places on school ground. (Noting evidences of erosion, ie. deltas, gullies, exposed roots, etc.)
7. Examining soil with a hand lens. Separating the parts of soil into piles of the same material. (Pebbles, roots, leaves, sand, etc.)
8. Measuring the temperature of soil in different spots.
9. Comparing plant growth in different kinds of soils.

I. Rocks and Minerals

1. Making soil by rubbing two rocks together.
2. Arranging rocks according to color, texture, hardness, luster, fabric and other characteristics.
   a. Scratching rock on sandpaper or unglazed porcelain tile for color streak.
   b. Examining a rock with hand lens to see the six of the particles (texture).
   c. Rubbing two rocks together to see which one makes a scratch in the other (hardness).
   d. Observing if the surface of the rock or mineral reflects light or appears shiny (luster).
3. Finding rocks that have been worn smooth by water or cracked by the weather. (Comparing a freshly broken surface with a weathered one).
4. Comparing man-made rocks (bricks) to natural one.
5. Comparing the weights of different kinds of rocks of same size.
6. Finding where plants are growing on and slowly breaking down rocks.

J. Pond

1. Netting and studying pond plants and animals.
2. Finding the average depth of the pond.
3. Making a simple map of the pond.
4. Finding the temperature of the water in different places and at different levels.

COMMUNITY COMPARISON

ECOLOGY is the study of inter-relationships between plants, animals, and the environment.

INVESTIGATION: To compare different communities and find out about some of the relationships of the inhabitants.

MATERIALS: Clothesline, thermometer, pencil, trowel, notebook.

INSTRUCTIONS: Lay the rope in a rough circle around the area you choose to study. Do not step inside the roped off area.

Things to find out about your plot:

1. Type of community: forest, field, swamp, other _____

2. Temperature: Take readings in several places within the circle. ____ ____ ____
   Why are there differences? _____
   Is the soil temperature the same as the air temperature? _____
   How much of your circle was in the sun? _____

3. How many different kinds of plants are in your circle? _____
   How many are trees, _____, shrubs ____, small soft stemmed plants ____,
   grasses _____, mosses _____, fungi _____, ferns _____, other _____?

4. Can you find any signs of animal life such as foot prints, nibbled leaves, nests, droppings, etc? List the animals._____

5. Soil analyses: Dig a small hole and look at the soil.
   What color is it? _____
   How does it feel? _____
   List any materials in it which you can recognize. _____
   Is it the same all the way down? _____
   Do you think it could absorb much water? _____

6. Are there signs of soil erosion in or near your circle?

7. Soil Splash Test:
   Materials: paper, stake, tack, sprinkler, water
   Take a clean sheet of paper to the stake and push the end of the stake into the soil. Fill the sprinkler with water, hold it about waist high, and make it "rain" just in front of the paper. Are the drops which splashed onto the paper dirty? _____ Why? _____
   Measure how high the dirt splashed on the paper.

8. Soil Absorption
   Materials: large bottomless can, small can for measuring, water. Twist the bottomless can into the ground. Get it in tight enouth so water won't leak out. Pour one small can of water into it. How long does it take to seep into the earth? (Count by one thousands if you don't have a watch.)

9. Any other information you notice about the area which may be important?

10. If you removed any part of your area, such as all the dead wood, or all the grass, or all of one type of animal, would this affect the rest of the community? _____ Why? _____

E 28

5. Finding where plant life and animal life is most abundant in and around the pond.
6. Finding evidence of water pollution.
7. Discovering if shade change the water environment.

K. Miscellaneous

1. Finding litter (refuse) on the school grounds and having children collect and display litter to the school or reuse or recycle the litter.
2. Helping to beautify the school grounds by correcting erosion problems, planting trees, flowers, etc.
3. Planning, planting, and harvesting a garden.
4. Finding ways that trees are useful to man.

These activities are taken from Outdoor Education Experiences for Emotionally Handicapped Children and Youth, proceedings from the Special Studies Institute held at Plattsburgh, NY, 1972. Available through NY State Educ. Dept.

Basic underlying outdoor education concepts:

1. The outdoors is a place to have fun. It is necessary that children are provided with fun and exciting outdoor experiences in order that proper attitudes concerning natural resources can develop.

2. An awareness of nature. Realizing the nature surrounds us - above, beneath, around - and using all our senses to do this, enables us to become more aware of nature and stirs our curiosity and interest.

3. Reverence for life. Children should gain enough understanding of the outdoors to have a love and respect for all living things - plants and animals.

4. Plants and animals need and help each other. This is a start toward understanding the world in which we live and our responsibilities for it. This concept brings to light the fact that our lives are tied in with all other living and non-living things of the earth in a "web of life".

References for science and nature:

Comstock, Anna B., Handbook of Nature-Study, Comstock Publishing Company, Inc., Ithaca, NY, 1941.

Brown, Robert and Mouser, G.W., Techniques for Teaching Conservation Education, Burgess Publishing Company, Minneapolis, 1964.

Buchsbaum, Ralph and Mildred, Basic Ecology, The Boxwood Press, Pittsburgh, 1957.

Laun, H. Charles, The Natural History Guide, Alsace Books and Films, Alton, Illinois, 2nd Ed.

Swan, Malcom D., ed., Tips and Tricks in Outdoor Education, The Interstand Printers & Publishers, Inc., Danville, Ill., 1970.

Golden Nature Guides, Golden Press, about $1.50@ are good references for children to use.

Plus many, many others!

CLUE CHART FOR IDENTIFYING BIRDS

SIZE	SHADE	SHAPE	SURROUNDINGS	SWEEP	SONG	NAME

BIRD CHARACTERISTICS

Size: Is the bird larger than a sparrow (6") ? or a robin (10")? or a crow (20") ?

Shade: Areas of the body where colors are located (variations in color at the throat, belly, wings, tail, and markings of feathers).

Shape:
a. body shape (plump, sleek, short and stubby, or streamlined)
b. head and bill shape (bill is thick or thin or long or short)
c. tail shape (rounded, wedge, square, notched)
d. wing shape (rounded, pointed, ragged)
e. leg shape (long or short)

Surroundings: Where was the bird located? (tree top, vertical position on tree trunk, in a wooded area, meadow, telephone wire, fence post, prairie, along the country road, swimming or floating on water, other)

Sweep: What were the flight characteristics? (jerky, darting, swooping, irregular flight)

Song: Are there phonetic sounds such as "raspy", "chip-chip,", "peter, peter?" or a trill?

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OBSERVATIONS IN THE WOODS

FOREST LAYER OR FLOOR	WHICH PLANTS ARE FOUND?	WHICH ANIMALS ARE FOUND?
Canopy/Penthouse		
Understory/Top Floors		
Shrub/Layer/Lower floors		
Herb Layer/Lower Floors		
Foreset Floor/Lobby		
Under the Ground/ Basement		

TREE CLUE CHART

SHAPE	LEAVES	BUDS	BARK	FLOWER	FRUIT	ANY DISTINCTIVE CHARACTERISTICS	

TREE CLUE CHART

BUDS	BARK	FLOWER	FRUIT	ANY DISTINCTIVE CHARACTERISTICS	NAME

WINTER TWIG CLUE CHART

TWIGS	BUDS	LEAF SCARS	OTHER	NAME

WINTER TWIG CLUE CHART

BUDS	LEAF SCARS	OTHER	NAME

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FLOWER CLUE CHART

SEPAL	PETAL	STAMEN	PISTIL	OTHER CHARACTERISTI

FLOWER CLUE CHART

PETAL	STAMEN	PISTIL	OTHER CHARACTERISTICS	NAME

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INSECT CLUE CHART

SIZE	NUMBER OF LEGS & WINGS	LOCOMOTION	COLOR	LOCATION	BODY PARTS	OTHER NOTES

INSECT CLUE CHART

F INGS	LOCOMOTION	COLOR	LOCATION	BODY PARTS	OTHER NOTES	NAME

ROCK AND MINERAL CLUE CHART

STREAK	LUSTER	HARDNESS	CLEAVAGE	FABRIC	TEXTURE	OTHER NOTES

ROCK AND MINERAL CLUE CHART

STER	HARDNESS	CLEAVAGE	FABRIC	TEXTURE	OTHER NOTES	NAME

GLASSBORO STATE COLLEGE

OUTDOOR EDUCATION DR. THOMAS J. RILLO

OUTDOOR EDUCATION LESSON PLAN

TOPIC: ROCKS AND MINERALS - HARDNESS

Objectives:

To develop skills in using a hand lens to examine rock and to describe what they see.
To show that some rocks are harder than others.
To develop skills in classifying rocks according to hardness.

Concepts:

Harder rocks will scratch softer rocks.
Some rocks will scratch a fingernail, a penny, a knife blade.
Some rocks can be easily broken.

Vocabulary:

Soft
Hard
Rock
Hand lens
Scratch
Fingernail
Penny

Materials:

hand lens
pennies
steel
rocks
(1 rock hammer - Leader)

Instructional Procedure and Activities:

Have children find one rock each.
Have them examine with a hand lens and have them describe what they see.
Have them try to scratch a penny with their rock.
Have them try to scratch the rock with their fingernails.
Have the leader test some rocks by scratching on steel.

Evaluation:

Who had a very hard rock?...a very soft rock?
Can you scratch any rocks with your fingernail?
What did a rock look like under a hand lens?
Do different rocks scratch other rocks?...pennies?...steel?

OUTDOOR EDUCATION AND SOCIAL STUDIES

Geraldine Navratil

Outdoor education means using reality to create a learning situation which will advance the growth of children's knowledge and concepts.

Outdoor education can provide real and concrete experiences for the study of all aspects of man's impact on the earth.

The following pages provide an outline sample of the potential of outdoor education for teaching geography, sociology, economics, history and political science. **

** The general outline was taken from teaching objectives of THE SOCIAL SCIENCES, CONCEPTS AND VALUES, Harcourt Brace and Javanovich

Physical features	Map Skills	People live in different environments on earth	People's development depends on adaptation to different environments	Man uses his environment to secure basic needs	Man changes his environment in order to utilize his resources and increase them	Man ad to his ment w forms organi
Trips and hikes to and around hills rivers lakes mountains bays gullies etc.	Creating symbols	Camping experiences in snow, grassy area, woodland, beach, etc.	Build small shelters with materials available while on camping trip in various different areas	Camp in a cave →	Visit canal rail roads, harbors	Take t of chi camp s across or lak up dis of dif rules, factor
	Mapping an outdoor area					
	Following a map		Gather wild food in different areas →			
	Using a compass		Go ice fishing →			
				Find reeds for weaving baskets		
				Visit mines, farms, etc. →		

People live in different environments on earth	People's development depends on adaptation to different environments	Man uses his environment to secure basic needs	Man changes his environment in order to utilize his resources and increase them	Man adapts to his environment when he forms political organizations	Man maintain alters and destroys his environment
Camping experiences in snow, grassy area, woodland, beach, etc.	Build small shelters with materials available while on camping trip in various different areas	Camp in a cave →	Visit canal rail roads, harbors	Take two groups of children to camp separately across a river or lake. Follow up discussion of different rules, safety factors, etc.	Tour city and countryside Compare to wilderness
	Gather wild food in different areas	→			Visit water purification plant
	Go ice fishing	→			Visit Dump
		Find reeds for weaving baskets			
		Visit mines, farms, etc.	→		

People use resources available to them **	Families use resources to satisfy their needs.	Culture determines use of resources	Man interacts to utilize resources	Division of Labor	Patterns of Needs depend on peoples choices	Ec Op
Have children use available resources to build shelters tools, etc.	Take children camping to determine basic human needs.	Visit parks and have children determine why same land is used for recreation	Visit factories, store etc.	Give children an opportunity to share work on a campout and to do each job alone for himself	Tour the city and discover the variety of construction materials for buildings	Vis pla wou fut opp for
Have children find wild food sources	Take children to farm and factory, tracing food to grocery shelf		Visit 2 bank-discuss medium of exchange			
Use nut shells, goldenrod etc to make natural dyes- Dye cloth						

	Culture determines use of resources	Man interacts to utilize resources	Division of Labor	Patterns of Needs depend on peoples choices	Economic Opportunity	Independent economic satisfaction varies
	Visit parks and have children determine why same land is used for recreation	Visit factories, store etc. Visit 2 bank-discuss medium of exchange	Give children an opportunity to share work on a campout and to do each job alone for himself	Tour the city and discover the variety of construction materials for buildings	Visit many places that would provide future job opportunities for children	Tour the city and suburbs
	45			46		

People learn from each other	People are interrelated and interact **	The characteristics of a community are the result of individuals and other groups in a specific environment **	Man learns social behavior from groups and individuals with whom he interacts **	Cultures in varying environments have similar components	Social systems are shaped by values of the group **	Soc pro bas ind int
Use children to reach others camping skills such as fire building, lashing, etc.	Provide an alone time for children each in an isolated place in the woods.	Have children establish and enforce safety rules during an outing →		Comparing Camping experiences in different places will establish similiarities	Let children establish values of trust, honesty, sharing etc before and following an overnight camping experience	S c e w a c I c f a g
	Have groups work together to make a picnic lunch		Have children establish and enforce general rules of behavior	Discover basic human needs for food, clothing and shelter and how people depend on each other to provide these things	Provide a day for children to experience using community owned materials only	

The characteristics of a community are the result of individuals and other groups in a specific environment **	Man learns social behavior from groups and individuals with whom he interacts **	Cultures in varying environments have similar components	Social systems are shaped by values of the group **	Social Systems provide the basis for individual interaction	Societies vary in the amount they change
Have children establish and enforce safety rules during an outing →		Comparing Camping experiences in different places will establish similiarities	Let children establish values of trust, honesty, sharing etc before and following an overnight camping experience	Share camping experiences with another class. Include children from another group	
	Have children establish and enforce general rules of behavior	Discover basic human needs for food, clothing and shelter and how people depend on each other to provide these things	Provide a day for children to experience using community owned materials only		

People's behavior is governed by common rules **	Members of family groups are governed by rules and laws	Community groups are governed through leadership and authority	Man's peaceful interaction depends on social controls **	Members of society change government as society needs change	Political systems depend on the interaction of many groups	Man eff by
Let children establish rules for an outing		Let children elect Classmate to assume leadership on a field trip		Let Children change rules as needed or make new rules		Visit and h cente
		Let children form a court of law to enforce laws →				Visit yard or ma of gr stone
		Visit major D. A. courtroom, police-Department →				Study histo
						Study schoo when built deci build so on

of roups rned and	Community groups are governed through leadership and authority	Man's peaceful interaction depends on social controls **	Members of society change government as society needs change	Political systems depend on the interaction of many groups	Man is effected by the past **	
	Let children elect Classmate to assume leadership on a field trip		Let Children change rules as needed or make new rules		Visit museums and historical centers	
	Let children form a court of law to enforce laws →				Visit a grave yard to read or make rubbings of grave stones	
	Visit major D. A. courtroom, police-Department →				Study local history	
				→	Study the school building when it was built, who decided to build it and so on	
49				50		

GOING THROUGH LIFE

Materials - cardboard and magic markers to build community
ball of string for each individual

This game - covers concepts like natural sites and what man has done to change them. It relates now to history and helps children to see that our urban environment is man-made and that each thing they do in life is related to what people have done in the past and are doing now. It can be developed in various ways. It could lead to discussion of social order, meaningless but unwritten rules we seem to live by, the pace of life today, the meaning of life, freedom and responsibility, etc.

The game begins by choosing a site to build a community of people. Decisions can be made as to what we will need in a community of people. Signs (some already made) can be made to represent hospital, home, farm, store, jail, etc. The symbolic town can be laid out in any way the people choose to do it.

Once the town has been built each individual is given his life (a ball of string). As a child, his life is planned for him and he receives a schedule to follow, ie. born on a farm, goes to the store, goes to school, visits the doctor at the hospital. From then on he is instructed to live his own life as he chooses.

As he goes through life he attaches his string to each place he goes thus leaving some indication of what he has done during his life. There are three rules to the game. Brown eyed people go first. If your string is broken see that it is mended and go to the hospital. If you break someone's string, mend it and then go to jail.

First one finished "wins" and is allowed to cut all the string into small pieces for the birds to use in the spring for nest building.

Follow with discussion of questions.

T 50a

GOING THROUGH LIFE

DIRECTIONS

Follow your schedule
Attach your string to each place you have been
Brown eyed people always go first
If you break someone's string, mend it and visit jail
If your string is broken, see that it is fixed and visit the hospital

FOLLOW UP QUESTIONS

1. Did you think it was fair for brown eyed people to go first?
2. What did you do when you came to a situation where no rule applied?
3. Did you hurry through life or take it slow and enjoy it?
4. Did you find it unpleasant when you had to decide where to go rather than to be directed?
5. Did you make a friend during life?
6. Did you help anyone during your life?

Born in Hospital	Born on the Farm
Go to Suburban House	Go to School
Go to Apartment	Visit the Hospital
Visit the Farm	Go to Suburban House
Born in Hospital	Born in the Suburban House
Go to the Store	Visit the Farm
Go to School	Go to the Apartment
Visit the Apartment	Go to School
Born in the Apartment	Born in Suburban House
Go to Grocery	Go to the Store
Go to Hospital	Visit the Hospital
Visit the Farm	Go to the Apartment
Born on the Farm	Born in the Apartment
Go to the Grocery	Visit hospital
Go to Suburban House	Go to the Store
Visit the Hospital	Go to Suburban House

MOON SURVIVAL

INSTRUCTIONS: You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, your ship was forced to land at a spot some 200 miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and since survival depends on reaching the mother ship, the most critical items left intact must be chosen for the 200 mile trip. Below are listed the 15 items undamaged after landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place number 1 by the most important item, the number 2 by the second most important, and so on through number 15, the least important. You probably won't be able to carry it all.

_____ Box of matches

_____ Food concentrate

_____ 50 feet of nylon rope

_____ Parachute silk

_____ Portable heating unit

_____ Two .45 calibre pistols

_____ One case dehydrated Pet milk

_____ Two 100 lb tanks oxygen

_____ Stellar map (of moon's constellations)

_____ Life raft

_____ Magnetic compass

_____ 5 gallons of water

_____ Signal flares

_____ First aid kit containing injection needles

_____ Solar-powered FM receiver-transmitter

(SEE FOLLOWING PAGE FOR SUGGESTED ANSWERS)

MOON SURVIVAL KEY

NASA ANSWERS

	Answer	Reason
Matches	15	No oxygen
Food	4	Food requirement
Nylon rope	6	for climbing or possible injury
Parachute	8	Shelter from sun
Heat Unit	13	Need only on the dark side
Pistols	11	Could make a propulsion device
Milk	12	Nutrition
Oxygen	1	No air on the moon
Map	3	Finding direction
Liferaft	9	Co bottles for propulsion
Compass	14	No magnetic poles
Water	2	No water sources on moon
Signal Flares	10	Possible distress call
First Aid Kit (oral pills and medicine	7	Possible need
Transmitter-receiver	5	Possible communication with Mother ship

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OUTDOOR GAMES

Herbert Foster

Throughout this Special Study Institute, there was an attempt to emphasise the fact that outdoor education does not mean taking children on an overnite trip in the woods. Outdoor education begins in the classroom and many outdoor education activities can be carried out on or around the school grounds.

During this workshop session the participants explored the many games and activities which can be included in an outdoor education program for handicapped children. Following are listed some of the activities discussed.

SUGGESTED SCHOOL GROUND ACTIVITIES

1. Classify natural and man-made objects.
2. Learn to use a compass.
3. Lay out a compass course for children to follow.
4. Find directions using the sun. Secure a sturdy stick in the ground on a sunny day. Place a smaller stick at the end of the stick's shadow. Repeat every hour, four times. You will have a line of sticks from east to west.
5. Find directions using a watch and the sun. Hold a watch so that the hour hand is pointed directly at the sun. Midway between the hour hand and 12 will be south.
6. Map a small area of the school grounds. Mark off the area to be mapped with a grid made of string. Form squares or rectangles being sure lines are parallel. Mark directions. Create symbols for the map and draw in symbols using a separate sheet of paper for each grid area. Reconstruct the map in the classroom and have each child transfer the large map to a small paper prepared with exact grid.
7. Use the map to find a hidden treasure.
8. Measure a tree by the length of its shadow. Place a ruler in the sun. Determine the ratio of the ruler's shadow to the ruler (or wait until the shadow is the same length as the ruler). Measure the shadow of the tree.

9. Make a sun dial.

10. Measure children's shadows throughout the day.

11. Collect plants growing around the school. It's surprising how many different kinds can be found.

12. Go for a "Burr-in" on a fall day in a weedy field. Wear old clothes and walk, run, skip, do somersaults, look for interesting things, play hide-and-seek and see how many seeds will stick to clothing. Bring along a plastic bag.

13. Mark off square foot anywhere outside. Observe closely for insect life.

14. Natural selection on toothpicks. Color toothpicks green, brown, red, yellow, and black (use paint or food coloring). Scatter the toothpicks in the grass. Have the children pretend to be birds looking for insects. They may only use their eyes until they are ready to pick up a tooth-pick- birds don't have hands to feel for food. Let the children count the recovered toothpicks and compare them with the original number. Let them conclude that a green toothpick or insect is less likely to be eaten. Try other areas as well.

SUGGESTED PROJECTS

1. Build a duck pond for your school yard.

2. Plant a spring garden (tulips, daffodils, etc.) in the fall.

3. Build a rock garden, plant sedum and hens and chicks. Observe them during the winter and spring.

4. Tap a maple tree

TELLING DIRECTIONS BY THE SUN---

Plant a stick in the sun - (In the ground) - Every hour put a smaller stick in the ground at the end of the shadow from the larger stick. Repeat 3 or 4 times - the sticks will be in a line from east to west.

OBJECTIVE

Movements of the sun. Directionality sequence of events - finishing something you start on schedule.

EARLY MORNING WALK

The following optional activity was provided for those brave participants who wished to rise before the sun:

SILENT WALK

Begin about 20 minutes before the sun comes up. No talking or noise allowed. Any other form of communication encouraged.

OBJECTIVE

Sensitivity to non verbal communication - other people's reactions - sensitivity to sight and sound of early morning.

This is an excellent activity for children whenever there is an opportunity to use it, regardless of the weather. When this activity was offered during the institute, it was snowing.

WORKSHOP SESSION V

A LOOK AT OUTDOOR EDUCATION PROGRAMS

Geraldine Navratil

With the help of slides, this session examined a few different kinds of outdoor education programs being carried on in the schools and how they got started. The program which has been developed at the Foreman Center Sattelite School in West Webster, New York was emphasised.

Several participants shared their experiences in outdoor education with handicapped children with the institute participants through slides. There were a number of programs described, illustrating the variety of outdoor education programs available.

During a question and answer period, much discussion centered around: starting an outdoor education program, financing the program, insurance, equipment, who should participate, type of program, etc.

CBRU - It's In To Be Out

Ralph Dykstra

As a part of the pre-registration procedures for this institute, each participant was asked to complete one line of a form which described a child in his or her class. This information was used during this institute session to illustrate the planning of an outdoor education program for handicapped children with the help of a computer and the Computer Based Resource Unit - "It's In To Be Out".

The sample computer guide provided in these proceedings, represents an abreviated version of the one provided at the institute and offered suggestions for each of the children described by the participants during the pre-registration activities.

Participants learned how the computer can help in the planning of an outdoor education program.

COMPUTER ASSISTED PLANNING

..... for individualizing instruction

TEACHERS . . . COMPUTER-BASED RESOURCE UNITS CAN HELP YOU PLAN FOR EACH INDIVIDUAL IN YOUR CLASS.

During the early 1960's, personnel at the Curriculum Center at the State University of New York at Buffalo, under the direction of Robert S. Harnack, began to investigate the feasibility of developing Computer-Based Resource Units. These units contain a greater number of suggestions than traditional resource units, thus offering more options in instructional planning. Because this information is computerized and coded to learning variables, it can be sorted rapidly to tailor unique programs for each child in relation to the profile information you provide. Months of pre-planning can be done for you in minutes.

WHAT IS A COMPUTER-BASED RESOURCE UNIT?

Units of study and skill development programs have been written for children K-12 on various topics such as World Health, Speaking and Listening, and Career Education. Groups of teachers, working cooperatively, formulated all of the major objectives they felt a teacher might select for a class preparing to study a specific topic. Then they listed all of the books, films, filmstrips and other materials which they found as potential resources. Subsequently they wrote as many statements of content about the topic as they thought were relevant. Taking into account the many different characteristics which children may exhibit, they devised activities which they felt were appropriate. These materials, activities, content items, and evaluation devices were then coded to each objective to which they were related. All of these strategies and resources were then coded in consideration of learner-variables as well, and stored in the memory bank of a computer. The computer can print out suggestions to the teacher appropriate activities, materials, content, and evaluation devices for the whole class and individual lists of suggestions which match the objectives you select and the profile you indicate for each child. The suggestions providec are not prescriptions and in the final analysis you, the teacher, are the one who decides whether you feel that Chuck should read a particular book, or whether Alice should take that field trip, or whether Don will really learn something by building that model.

Research and Development Complex-State University College-1300 Elmwood Avenue
Buffalo, New York 14222

Instructional Objectives for CBRU

IT'S IN TO BE OUT (120)
(Approximate grade level 4-12)

A. Basic Camping Skills
1. To demonstrate the use of outdoor ethic.
2. To demonstrate the necessary safety aspects of outdoor activity.
3. To determine necessary equipment for varying outdoor experiences.
4. To organize appropriate menus for the time spent in out-of-doors.
5. To plan basic food lists necessary for varying outdoor experiences.
6. To determine necessary equipment for cooking according to environmental conditions.
7. To determine necessary clothing for particular activities and season.
9. To set up shelter according to climatic and geographic conditions.
10. To build shelters from basic items attainable in out-of-doors.
11. To build a fire under various environmental conditions.
12. To demonstrate understanding of rope work.
14. To identify edible plants and food in environment.
15. To create tools using materials found in out-of-doors.
16. To utilize the basic orientation skills.
18. To demonstrate responsible care of property - his own and others.
33. To construct craft items from materials found in the out-of-doors.

B. Social Skills
19. To utilize cooperative techniques in solving common problems related to living in the out-of-doors.
20. To discriminate between socially acceptable and unacceptable behavior in varying environments.
21. To identify basic human needs in a primative situation.
22. To analyze elements of a social community.
23. To utilize time effectively when engaged in outdoor activities.

C. Academic Skills
24. To apply science skills in interpreting natural phenomena.
25. To describe the consequences of man's effect on his environment.
26. To apply math skills in solution of problems encountered in outdoor experience.
27. To refine communication skills within the context of outdoor experience.
35. To describe a variety of plants and animals which are common to one's geographical location.

D. Personal Skills
28. To demonstrate self reliance by utilizing one's abilities.
29. To demonstrate ability to cope with unique situations.
30. To differentiate between real and imaginary fears.
31. To respond to emergencies in a rational way.
32. To complete tasks in out-of-doors.

In addition to this Computer Based Resource Unit, a Teacher Manual has been prepared for "It's In To Be Out". The manual contains specific suggestions for implementing an outdoor education program. It is available at $2.00 from:

Outdoor Education Project
Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

Instructional Variables

IT'S IN TO BE OUT

General Interests (Select 3-5)

1. Agriculture
5. Biology
6. Botany/Zoology
9. Communication
10. Earth Science/Geography
11. Fine Arts/Crafts
13. Folklore/Customs
15. Home Economics
16. Mathematics
23. Education
24. Engineering/Technology
26. Sociology/Family Living
27. Sports/Recreation
30. Medicine/Health
31. Adventure

Developmental Tasks for Middle Childhood*

74. Learning physical skills necessary for ordinary games
75. Building wholesome attitudes toward oneself as a growing organism
76. Learning to get along with age-mates
78. Developing fundamental skills in reading, writing and calculating
79. Developing concepts necessary for everyday living
80. Developing conscience, morality, and a system of values
81. Achieving personal independence

Developmental Tasks for Adolescents*

82. Developing attitudes toward social groups and institutions
85. Achieving emotional independence from parents and other adults
88. Developing intellectual skills and concepts necessary for civic competence
89. Desiring and achieving socially responsible behavior

Reading Level (Relative to grade level - select one)

103. Non-Reader
104. Pre-Primer
105. Primer
106. 1
107. 1.5
108. 2
109. 2.5
110. 3
111. 4
112. 5
113. 6
114. 7
115. 8
116. 9
117. 10
118. 11
119. 12
120. Above 12

*Select as many as appropriate

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Research and Development Complex
State University College at Buffalo

COMPUTER-BASED RESOURCE GUIDE: REQUEST FORM

Unit Title It's In To Be Out

Unit Number 120

School Name State University College

Address Buffalo N.Y. 14222
(street) (city) (state) (zip)

PART A

Teacher's Name: Ralph R. Dykstra (please print) Group Objectives: 11 12 16

Class Mental Age Range: (Circle the consecutive numbers which best describe the M.A. Range of your class - typically a 4 - 5 year range)*

194-195-196-197-198-199 200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218

*See unit instructional variables for appropriate M.A. code numbers.

PART B

1	2	3	4	5	6		7	8
		VARIABLE CATEGORIES						
Student Name	Individual Objectives	Student Interests	Devel. Tasks	Reading Level	Age M.A.	Age C.A.	Physical Handicaps	Learning Environment
Florence W.	9 12	10 11 23 15	85 81	120	218	242		259
Rose Mary L.	33 27	9 11 15 23 31	74,75,76 79 81	106	205	231	245	259
Thomas G.	2 20	27 30 31	74 78 79 81	106	204	231	247 248	259
Clairann L.	2 15	9 26 27 31	74 75 76 79 81	103	204	234	247	259
Kathleen F.	7 31	11 15 23 29 31	74 75 76 78 81	104	204	235	247 248	268 259

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1 Student Name	2 Individual Objectives		3 Student Interests	4 Devel. Tasks	5 Reading Level	6 Age M.A.	6 Age C.A.	7 Physical Handicaps	8 Learning Environment

INSTRUCTIONS FOR REQUESTING A COMPUTER BASED RESOURCE GUIDE:

A. Necessary Materials

1. "Computer Based Resource Guide Request Form"
2. Objectives List.
3. Variables List for the unit being requested (found on reverse side of Objective List).

B. Directions for completing the Request Form:

1. Indicate complete mailing address.
2. Indicate unit title and unit number.
3. Part A: Group Request: After indicating "teacher's name", you may select from the objectives list as many as five (5) objectives which you plan to utilize with the entire class. Indicate the numbers of the "Group Objectives" selected on the lines provided. Utilizing the information indicated on the Variables List under "Mental Age", circle all of those numbers which would indicate the mental age range of the students in your class. In most cases, this would include at least 4 or 5 consecutive M.A.s.
4. Part B: Individual Student Request: List in Column 1 identifier (first name or other designators, e.g. initials, student number) for each student in your class. For each student select one or two appropriate objectives from the Objectives List and indicate the number(s) of each objective in Column 2. The individual student objectives may be the same as those selected in Part A or they may be different.
5. All variables categories are optional. You may provide in Columns 3 through 8 as much or as little information as you wish concerning student characteristics, keeping in mind that the information which you do provide for each student will serve to screen the activities, materials, and measuring devices which he or she will receive.
6. Note the following additional instructions and suggestions:
   a. In listing variables, use only code numbers taken from the Variables List. You need not fill in the same categories for each student.
   b. If you plan to provide information related to Interests and/or Developmental Tasks, it is suggested that you indicate approximately 3 to 5 items in any combination of the two categories, i.e., 5 Interests or Developmental Tasks, 4 Interests and 1 Developmental Task, 3 Interests and 2 Developmental Tasks, etc.

Return completed forms to: Research and Development Complex-State University College-1300 Elmwood Avenue-Buffalo, N.Y. 14222

COMPUTER-BASED RESOURCE UNITS DEVELOPED IN PART BY THE RESEARCH AND DEVELOPMENT COMPLEX-STATE UNIVERSITY COLLEGE AT BUFFALO, N.Y. WITH FUNDING FROM THE N.Y. STATE EDUCATION DEPARTMENT AND THE U.S. OFFICE OF EDUCATION.

STATE UNIVERSITY COLLEGE AT BUFFALO

PROFESSIONAL STUDIES

RESEARCH AND DEVELOPMENT COMPLEX

1300 ELMWOOD AVENUE

BUFFALO, NEW YORK 14222

****

RESOURCE GUIDE - IT IS IN TO BE OUT

****

RALPH R. DYKSTRA
RESEARCH AND DEVELOPMENT COMPL
1300 ELMWOOD AVENUE
BUFFALO, NEW YORK 14222

LOCATION	012
SEQUENCE	N038

** THIS IS A COMPUTER-BASED RESOURCE GUIDE **

A RESOURCE GUIDE IS A SELECTIVE SEGMENT OF A RESOURCE UNIT.

A RESOURCE UNIT, BY DEFINITION, IS A PLANNING AID WHICH PROVIDES THE TEACHER WITH A COMPILATION OF SUGGESTED INSTRUCTIONAL MATERIALS AND STRATEGIES WHICH ARE RELATED TO A SERIES OF INSTRUCTIONAL OBJECTIVES. THE INFORMATION AND STRATEGIES CONTAINED HEREIN ARE SUGGESTIVE AND NOT PRESCRIPTIVE .

THEY ARE SUGGESTIVE TO THE EXTENT THAT EDUCATORS WHO DEVELOP THE UNIT HAVE ATTEMPTED TO RELATE CERTAIN ACTIVITIES, MATERIALS AND MEASURING DEVICES TO OBJECTIVES, AND A SERIES OF STUDENT VARIBLES. AT BEST THIS IS ONLY A PRELIMINARY PROCESS. IN THE FINAL ANALYSIS IT IS YOU--THE CLASSROOM TEACHER WHO MUST MAKE THE FINAL DECISION WITH STUDENT COOPERATION WHENEVER POSSIBLE WHETHER CERTAIN ACTIVITIES AND CERTAIN MATERIALS ARE APPROPRIATE FOR EACH CHILD.

YOUR RESOURCE GUIDE IS DIVIDED INTO THREE PARTS -

PART A -

THE TEACHER PORTION WHICH CONTAINS THE OBJECTIVES YOU HAVE SELECTED FOR TOTAL GROUP WORK. UNDER EACH OBJECTIVE ARE LISTED RELATED-CONTENT GROUP ACTIVITIES, MATERIALS AND MEASURING DEVICES.

PART B -

THE STUDENT PORTION WHICH CONTAINS EACH STUDENT S NAME, THE TWO OBJECTIVES HE HAS SELECTED, AND SUGGESTED ACTIVITIES AND MATERIALS RELATED TO EACH OBJECTIVE WHICH ARE RETRIEVED ON THE BASIS OF THE VARIBLES YOU INDICATED ON THE REQUEST FORM.

PART C -

A TOTAL LISTING OF ALL MATERIALS SUGGESTED IN THIS GUIDE.

PLEASE BE SURE TO COMPLETE AND RETURN THE EVALUATION FORM ATTACHED TO THIS GUIDE. FUTURE EXPANSION AND IMPROVEMENT OF EACH UNIT DEPENDS UPON YOUR SUGGESTIONS AND REACTIONS.

NIT TITLE - IT IS IN TO BE OUT

BEST COPY AVAILABLE

EQUESTOR NAME - RALPH R. DYKSTRA

BJ. 11

11. TO BUILD A FIRE UNDER VARIOUS ENVIRONMENTAL CONDITIONS.

ONTENT OUTLINE

16. IT S EASY TO BUILD A FIRE WHEN EVERYTHING IS DRY AND THERE IS PLENTY OF FUEL AROUND. HOWEVER, WHAT HAPPENS WHEN IT S RAINY AND GOOD FUEL IS SCARCE. THERE ARE A FEW LESSONS TO BE LEARNED UNDER THESE CONDITIONS. MOST IMPORTANT IS THAT A FIRE CAN BE LIGHTED UNDER ANY CONDITIONS IF THE PROPER TECHNIQUES ARE USED.
YOU CAN OFTEN FIND DRY WOOD INSIDE DEAD TREES OR OLD LOGS. AT NIGHT, WHEN RETIRING BE SURE TO PLACE A RAINPROOF COVER OVER YOUR FUEL SUPPLY THIS WILL INSURE WOOD IN THE MORNING. A FIRE IS ABSOLUTELY ESSENTIAL CARRY A SMALL CAN OF STERNO AND START A FIRE WITH THAT.

55. TEACHER RESOURCE. HARRIS, DOROTHY V., VAN DER SMISSEN, BETTY. HOW TO IMPROVE YOUR CAMPCRAFT - SERIES ONE. THE ATHLETIC INSTITUTE MERCHANDISE MART. $.75 FOR BOOK.
BOOK WAS MADE FROM FILMSTRIP. FILMSTRIP IS AVAILABLE FROM ABOVE ADDRESS. PICTURES AID NON-READER.

57. TEACHER RESOURCE. RUTSTRUM, CALVIN. THE NEW WAY OF THE WILDERNESS. THE MACMILLAN COMPANY. 1963. PURCHASE - $4.95.
A GOOD TEACHER RESOURCE BOOK ON WILDERNESS COOKING, EQUIPMENT, CLOTHING, COMPASS POINTS, WINTER CAMPING, CANOEING AND BACKPACKING.

67. TEACHER RESOURCE. CHAPPELL, WALLACE EDWIN. WHEN YOU GO TRAIL CAMPING. DIVISION OF LOCAL CHURCH. GENERAL BOARD OF EDUCATION OF THE UNITED METHODIST CHURCH. $.75.
RESOURCE PAMPLET FOR PLANNING HIKING TRIPS FOR YOUNG ADULTS. ORGANIZES GROUP RESPONSIBILITIES AND ADMINISTRATIVE PLANNING. INCLUDES HIKING SKILLS, TRAIL EQUIPMENT, FOODS, HEALTH, PACK ANIMALS. BICYCLES, SAMPLE MENUS, FOOD LISTS, CHECKLISTS, BIBLIOGRAPHY, AND ADDRESSES OF ORGANIZATIONS.

68. TEACHER RESOURCE. CARDWELL, PAUL JR. AMERICA S CAMPING BOOK. CHARLES SCRIBBNER S AND SONS. 1969. $10.00.
ENCYCLOPEADIA REFERENCE OF ALL ASPECTS OF CAMPING. SECTION ON WILDERNESS CAMPING INCLUDES PATTERNS FOR MAKING TENTS, PACKS SOPHISTICATED COMPARISON OF EQUIPMENT. GLOSSERY AND BIBLIOGRAPHY OF CAMPS, ORGANIZATIONS, AND HELPFUL BOOKS.

74. TEACHER RESOURCE. COLBY AND ANGIER. THE ART AND SCIENCE OF TAKING TO THE WOODS. THE STACKPOLE CO.
A GOOD ENCYCLOPEDIA ABOUT OUTDOOR LIVING. MORE READING THAN ILLUSTRATIONS, BUT VERY INFORMATIVE. CONTAINS EVERYTHING FROM SLEEPING BAGS TO INSECT CONTROL, EMERGENCIES AND KNOT TYING.

75. TEACHER RESOURCE. BROWER, DAVID. THE SIERRA CLUB WILDERNESS HANDBOOK. BALLANTINE BOOKS, INC.
AN EXCELLENT RESOURCE BOOK. EVERY ASPECT OF WILDERNESS CAMPING IS INCLUDED - FOOD, OUTDOOR MEDICINE, EQUIPMENT, ETC. ALSO HAS MAPS, CHARTS, AND DRAWIINGS.

78. TEACHER RESOURCE. EDGREN AND PETERSON. THE FUN OF WINTER CAMPING. THE CAMP AND TRAIL LIBRARY, ASSOCIATION PRESS.
COLD WEATHER ACTIVITIES - GAMES, SPORTS, HOBBIES, SKIING, SNOW-SHOEING

IDEAS FOR COMFORTABLE WINTER CAMPING.

79. TEACHER RESOURCE. SIERRA CLUB. 250 WEST 57TH STREET, NEW YORK, NEW YORK 10019. COST DEPENDS ON WHAT MATERIAL IS REQUESTED AND QUALITY. THE SIERRA CLUB IS A MOUNTAIN CLIMBING ORGANIZATION, BUT ALSO PARTICIPATES IN HIKING AND CAMPING. EXCELLENT BOOKS ARE AVAILABLE AS WELL AS COLORFUL POSTERS.

86. TEACHER RESOURCE. OLSEN, LYNN. WORLDS AROUND US. JULY 1972. DECUSSES PREPARATION FOR TRIPS. STUDENT INVOLVMENT IN PLANNING, MAP READING, LEARNING BY DOING EMPHASIZED.

88. TEACHER RESOURCE. CHAPPEL, LINDA LEE. SCHOOL FOREST - AN OUTDOOR CLASSROOM.
SHORT DESCRIPTION OF MADISON WISCONSIN S OVERNIGHT NATURE STUDY.

91. TEACHER RESOURCE. PROJECT ADVENTURE. HAMILTON WENHAM REGIONAL SCHOOL DISTRICT.
THIS IS THE APPLICATION OF THIS SCHOOL DISTRICT FOR TITLE III FUNDS. CONTAINS ALL ASPECTS OF PROGRAM DEVELOPMENT, FINANCING AND PROPOSED EXPERIENCE.

93. TEACHER RESOURCE. BALE, ROBERT O. OUTDOOR LIVING. BRUGESS PUBLISHING CO.
EXCELLENT AND THOROUGH BOOK ON OUTDOOR SKILLS. ILLUSTRATED. IMPORTANT CHAPTER ON SURVIVAL CAMPING.

108. TEACHER RESOURCE. VAN DER SMISSEN, BETTY AND GOERING, OSWALD H. A LEADER S GUIDE TO NATURE - ORIENTATED ACTIVITIES. IOWA STATE UNIVERSITY PRESS. 1965. PURCHASE - $3.98
GOOD COMPREHENSIVE REFERENCE FOR NATURE GAMES, NATURE CRAFTS AND OUTDOOR LIVING SKILLS. DETAILED DIRECTIONS FOR MANY ACTIVITIES.

111. TEACHER RESOURCE. CAMPING. GOLDEN HANDBOOKS. GOLDEN PRESS, NEW YORK. PURCHASE - $3.50
CLEAR, CONCISE INFORMATION. INFORMATIVE ILLUSTRATIONS AND DIAGRAMS.

114. TEACHER RESOURCE. JACK LONDON. TO BUILD A FIRE. BEST SHORT STORIES OF JACK LONDON. THE SUN DIAL PRESS, GARDEN CITY, NEW YORK. 1945.
EXCITING OUTDOOR ADVENTURE. DEPICTS A MAN S FIGHT FOR SURVIVAL AGAINST THE PERILS OF THE ARCTIC.

GROUP ACTIVITIES

18. CHILDREN COLLECT OBJECTS OF NATURE AND THEN MAKE A COLLAGE. OBJECTS TO USE MAY INCLUDE THE FOLLOWING - PINE CONES, SEEDS, PINE NEEDLES, FLOWERS, BARK, MOSS, TWIGS, DRIFTWOOD, HUSKS.

71. WATER BOIL CONTEST. EACH CHILD SELECTS A UTENSIL TO BOIL WATER. PANS MAY BE MADE OUT OF ALUMINUM FOIL, CANS, OR HIS OWN FINDINGS. CANS MAY VARY IN SIZE. GIVE EACH STUDENT TWO CUPS OF WATER. STUDENTS MUST SELECT HIS OWN PLACE TO BOIL WATER IN ONE LARGE COOKING FIRE. KEEP TIME TILL THE FIRST POT BOILS. USE WATER TO MAKE HOT JELLO. LET THE WINNER SHARE JELLO.

111. TIN CAN STOVE. MATERIALS - NO. 10 TIN CAN, PAIR OF TIN SNIPS, ROLL-TYPE CAN OPENER, PUNCH OPENER, HAMMER.
- REMOVE THE LID FROM THE NO. 10 CAN USING THE ROLL-TYPE CAN OPENER. THE OPEN END WILL BE THE BOTTOM OF THE STOVE.

- CUT A SQUARE IN THE BOTTON OF THE STOVE UP THE SIDE ABOUT 3 INCHES SQUARE. USE TIN SNIPS AND WEAR GLOVES. DO NOT CUT ACROSS THE TOP OF THE SQUARE, BEND THE TOP OVER INTO THE CAN
- USING YOUR PUNCH OPENER, PUNCH TWO OR THREE SMALL HOLES AT THE TOP OF THE CAN ON THE SIDE OPPOSITE THE SQUARE DOOR
- MAKE A SMALL FIRE INSIDE THE CAN WITH TWIGS OR A BUDDY BURNER.

122. SEND OUT THREE GROUPS OF CHILDREN TO GATHER FIREWOOD. ONE GROUP SHOULD BE DIRECTED TO GATHER TINDER, ANOTHER KINDLING, AND THE THIRD FUEL LARGER LOGS TO KEEP THE FIRE GOING . UPON ARRIVING BACK AT THE CAMPSITE THE THREE GROUPS SHOULD WORK TOGETHER TO BUILD A FIRE. BE SURE TO EMPHASIZE SAFETY IN BUILDING AND PUTTING OUT THE FIRE.

134. STRING BURNING CONTEST. DIVIDE INTO GROUPS. PLACE TWO STRINGS STRETCHED BETWEEN TWO VERTICAL STICKS. EACH GROUP GATHERS WOOD, PREPARES IT AND MAKES A FIRE UNDER THE STRINGS. FIRST GROUP TO BURN THROUGH THE STRING WINS.

135. FIRE BUILDING AND WATER BOILING. TWO CHILDREN MAKE UP A TEAM. ON GO THEY PLACE A POT ON A SUITABLE SUPPORT, GATHER WOOD, STRIKE A MATCH OR USE FLINT AND A KNIFE, LIGHT FIRE AND KEEP IT GOING UNTIL WATER BOILS OVER EDGE OF POT. TEAM TO MAKE FIRE USING ONLY NATURAL MATERIALS AND THAT BOILS THE WATER OVER THE TOP OF THE POT WINS.

143. EXTINGUSH THE FIRE WHEN YOU DON T NEED IT. SPRINKLE WATER ON THE EMBERS AND STIR THE EMBERS WITH A STICK AND SPRINKLE AGAIN. WET THE AREA OR WORK THE DIRT INTO THE ASHES UNTIL THE FIRE IS DEAD. BURY THE ASHES AND LEAVE SITE AS IT WAS FOUND.

164. GATHER DRY WOOD OFF THE GROUND OR LOW, DEAD BRANCHES OF TREES FOR THE WOOD PILE. THEN SORT THE WOOD INTO THREE TYPES TINDER, TINY STICKS TO START BURNING FROM THE FIRST FLAME OF THE MATCH OR SPARK FROM FLINT KINDLING, LONG NARROW STICKS, NO THINKER THAN THUMB, TO MAKE FIRE LARGER , AND FUEL, THICK STICKS TO KEEP THE FIRE BURNING.

165. GATHER WOOD ACCORDING TO GIVEN SPECIFICATIONS. FOR EXAMPLE - 20 PIECES OF KINDLING, 10 OF TINDER, AND 5 OF FUEL.

321. TO LIGHT A FIRE IN DIFFICULT SITUATIONS USE PINE PITCH. THIS IS A FLAMMABLE ITEM.

322. MANY TIMES DURING A RAINSTORM DRY WOOD MAY BE FOUND ON PINE TREES. LOOK ON THE SIDE THAT IS OPPOSITE THE DIRECTION OF THE WIND, ALSO DRY WOOD CAN SOMETIMES BE FOUND IN DEAD, DECAYED TREES.

323. DURING RAINY DAYS WOOD SHOULD BE PROTECTED FOR USE IN A FIRE BY COVERING IT WITH A TARP OR A RAINCOAT.

324. ON WINDY DAYS IT MAY BE NECESSARY TO CONSTRUCT A WINDBREAK. USE ROCKS OTHER THAN SLATE AND PLACE THEM IN A POSITION THAT WILL BLOCK OUT THE WIND. ALSO LOGS MAY BE USED DURING A WET SEASON ON THE HOLLOW OF A TREE.

326. USE STERNO FLUID WHEN FIRES ARE DIFFICULT TO START. A SMALL CAN WILL BURN FOR A LONG TIME AND IT IS CONVENIENT TO CARRY.

385. BUILD A GOOD FIRE PIT FOR HEATING AND COCKING.
- THE PIT SHOULD BE AT LEAST 8 I CHES DEEP AND LINED WITH STONES.
- SPARK PROTECTORS CAN BE MADE BY PLACING GREEN PINE BOUGHS IN A CIRCLE AROUND THE FIRE.

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- THE PIT SHOULD BE IN LINE WITH THE SHELTER ENTRANCE AND SLIGHTLY FORWARD FROM THE CENTER.

391. A STEAM PIT IS CONSTRUCTED BY LINING WITH STONES AND BUILDING A FIRE. AFTER AN HOUR THE COALS ARE SCRAPPED OUT AND THE PIT IS LINED WITH WET GREEN GRASS. THE FOOD IS PLACED ON THE GRASS AND QUICKLY COVERED WITH MORE WET GRASS. THEN WATER IS POURED ON AND ITS CONTENTS SHOULD BE QUICKLY COVERED WITH A PIECE OF CLOTH OR HIDE ACTUALLY ANYTHING TO KEEP THE DIRT OUT WHICH IS THEN HEAPED OVER THE ENTIRE PIT. THE FOOD IS ALLOWED TO COOK AN HOUR OR SO.

495. HOW THE TREE IS BENT. ON A WALK IN THE NEIGHBORHOOD OR IN THE WOODS OBSERVE THE DIRECTION WHICH TREES HAVE BENT IN THEIR GROWTH OR SWAY WITH THE WIND. THE KNOWLEDGE OF THE PREVAILING WINDS IS A VITAL FACTOR IN THE IDENTIFICATION OF DIRECTIONS. IN A PREVAILING WESTERLY CLIMATIC REGION, THE TREES SHOULD BEND TOWARD AN EASTERLY DIRECTION. LATER, ON ANOTHER HIKE, FIND AN EXAMPLE OF A TREE OR CLUMP OF TREES WHICH WOULD DEMONSTRATE THIS BEND. ANOTHER TECHNIQUE - SUN S APPARENT RISING IN THE EAST, 90 DEGREE ANGLE OR OVERHEAD AT MID-DAY, AND SETTING IN THE WEST.

522. A HUNTER-TRAPPER FIRE. CONSTRUCT A FIREPLACE OF TWO LOGS ABOUT 3 FEET LONG AND 6 INCHES THICK BY PLACING THEM IN A V SHAPE CLOSE ENOUGH TOGETHER TO SUPPORT THE COOKING POT. THE OPEN END OF THE V SHOULD BE FACING TOWARD THE WIND. BUILD FIRE BETWEEN LOGS TEEPEE-STYLE. FOR BAKING, BURN DOWN TO COALS AND PUSH COALS INTO THE V OF THE LOGS - THEN YOU MAY FORM ANOTHER TEEPEE TOWARDS THE OPEN END FOR FRYING AND POT COOKING. IF BIG LOGS AREN T AVAILABLE, USE SMALLER ONES 3-4 INCHES THICK AND DIG A TRENCH FOR THE FIRE SO THAT PROPER COOKING HEIGHT IS AVAILABLE, STONES ALSO MAY BE SUBSTITUTED FOR LOGS.

523. UPON ARRIVAL AT THE CAMPSITE, IF A RAIN THREATENED DAY, HAVE THE CHILDREN GATHER DRY LEAVES, TWIGS, SMALL BRANCHES, ETC. TO ACT AS TINDER AND KINDLING FOR A FIRE LATER. HAVE THEM COVER THE TINDER AND KINDLING WITH A PIECE OF CANVAS OR OTHER WATER REPELLENT MATERIAL IN ORDER TO MAKE SURE THE MATERIALS STAY DRY. THIS ACTIVITY SHOULD BE PLANNED IN THE CLASSROOM PRIOR TO THE TRIP.

530. READ JACK LONDON S SHORT STORY TO BUILD A FIRE TO THE CLASS. AFTER THE ENTIRE STORY HAS BEEN READ AND EXPLAINED AS AN ADVENTURE ABOUT A MAN FOOLISHLY ALONE IN THE ARCTIC, LIST ERRORS THE MAN MADE AS A TRAVELER WITH HIS DOG IN 90 DEGREE BELOW ZERO WEATHER. RE-READ THE SECTION STRESSING THE MAN S ATTEMPT TO BUILD A FIRE AND CONTRAST HIS MISTAKES BY DESCRIBING PROPER METHODS FOR BUILDING A FIRE. MAKE A LIST OF PROPER FIRE BUILDING TECHNIQUES AS THEY PERTAIN TO SITE SELECTION, NEEDED BURNABLE MATERIALS, SAFETY FACTORS AND WEATHER CONDITIONS.

545. IN CLASS, DEMONSTRATE THAT THE AMOUNT OF SURFACE AREA OF FUEL PLAYS AN IMPORTANT PART IN GETTING THE FUEL TO BURN. BURN A SHEET OF PAPER CRUMPLED INTO A TIGHT BALL AND BURN A SIMILAR SHEET SPREAD OUT. COMPARE THE RATES OF BURNING ABSORBANT COTTON IN TIGHT BALLS AND SPREAD OUT AND HELD BY TONGS WILL ALSO DEMONSTRATE THIS CONCEPT . DEVELOP THE CONCEPT THAT THE GREATER THE SURFACE, THE MORE READILY IT WILL BURN BECAUSE THE MORE AIR OXYGEN CAN REACH THE FUEL. RELATE THIS IDEA TO THE CONSTRUCTION OF A CAMPFIRE BY COLLECTING KINDLING AND SPREADING IT OUT BUILDING UP TWIGS AND SMALL BRANCHES SO THAT AIR CAN FLOW INTO THE AREA, THUS ENABLING THE HEAVIER LOGS TO EVENTUALLY GLOW AND CATCH FIRE. GIVE EACH CHILD A SET OF MATERIALS, SUCH AS SMALL SCRAPS OF PAPER KINDLING , TOOTHPICKS, TWIGS, PENCILS AND HAVE

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THEM CONSTRUCT A TYPE OF CAMPFIRE AND POINT AT THE SURFACE AREA FOR BURNING IN THE VARIOUS STAGES. ON AN EXPERIENCE CHART, LIST THE CHILDREN S OBSERVATIONS MADE ABO T RATE OF BURNING AND SURFACE AREA.

547. IN THE CLASSROOM, PRESENT THE FIRE-DIAGRAM TRIANGLE. THE POINTS OF THE TRIANGLE SHOULD BE LABELED - 1 FUEL OR BURNABLE MATERIAL, 2 AIR SUPPLY AND 3 SOURCE OF HEAT. WHILE PRESENTING THE CONCEPTS, DEMONSTRATE THE TRIANGLE BY STARTING A PIECE OF PAPER ON FIRE ON ASBESTOS PAD WITH A MATCH AND POINTING OUT THE 3 PARTS OF THE TRIANGLE. OTHER DEMONSTRATIONS SHOULD INCLUDE PUTTING OUT THE FIRE BY POURING WATER ON IT TO COOL THE BURNABLE SUBSTANCE, BLOWING AIR GENTLY ON GLOWING PAPER TO HAVE IT BURST INTO FLAME, SMOTHER THE FIRE WITH A BLANKET OR ASBESTOS, ATTEMPT TO BURN ASBESTOS. THE CHILDREN SHOULD PARTICIPATE IN THESE ACTIVITIES IF THE SCHOOL PERMITS. ON AN EXPERIENCE CHART, LIST THE CHILDREN S OBSERVATIONS IN THEIR OWN WORDS AS TO WHAT A FIRE NEEDS TO BURN AND HOW TO PUT OUT A FIRE. RELATE THESE OBSERVATIONS TO HOW TO BUILD A CAMPFIRE. PRESENT THE CHILDREN WITH KINDLING AND VARYING SIZED PIECES OF WOOD. HAVE THEM CONSTRUCT A TEEPEE TYPE OR LOG CABIN TYPE CAMPFIRE AND DEMONSTRATE HOW THE FIRE TRIANGLE APPLIES.

MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943.
LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

4. BOOK. COLBY, C. B. FIRST CAMPING TRIP. COWARD-MC CANN, INC. NEW YORK, NY 1955.
RESOURCE BOOK. DRAWINGS WITH CAPTIONS. COVERS ALL SKILLS OF WILDERNESS CAMPING.

7. BOOK. LINDHOLM, LT. COLONEL MAUNO A. GUIDE FOR YOUNG CAMPERS. HART PUBLISHING CO. NEW YORK, NY. 1961. $3.95.
A WELL ILLUSTRATED STEP BY STEP GUIDE TO CAMPING. INCLUDES CHECK LISTS FOR PLANNING OUTDOOR ACTIVITIES. COVERED IN BOOK IS - CLOTHES FOR CAMPING, SHELTERS, FOIL COOKERY, WIRE CRAFT, TREE IDENTIFICATION, SANITATION, TRAIL MARKS, BEDDING DOWN, AND WOODCRAFT.

68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201. CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
NEW YORK HAS AN EXCELLENT CONSERVATION DEPARTMENT. THEY CAN PROVIDE SPEAKERS, CAMPSITES, AND INFORMATION ON WHERE TO GO TO ACCOMPLISH A SPECIFIC OBJECTIVE. THEY WILL ALSO FURNISH AND WORK WITH YOU IN ENCOURAGING CONSERVATION PROJECTS.

72. BOOK. BAKER, ELIZABETH. TAMMY CAMPS IN THE ROCKY MOUNTAINS. HOUGHTON MIFFLIN CO. BOSTON. 59 PGS. $2.95.
TAMMY S INTEREST IN PHOTOGRAPHY GETS HER INTO A PREDICAMENT. CLIMBING AND CAMPING ADVENTURES ARE ESSENTIALS IN THE STORY.

78. BOOK. MACFARLAN. THE BOY S BOOK OF OUTDOOR DISCOVERY. STACKPOLE BOOKS. HARRISBURG, PA. 17105. $4.50.
ACTIVITIES FOR LEARNING CAMP SKILLS. CHAPTERS 1 - 6 AND 9 HELPFUL. SIMPLE EXERCISES IN ORIENTATION, AND NATURE STUDIES WHICH CHILDREN CAN DO INDEPENDENTLY.

86. BOOK. MACFARLAN, ALLEN A.. THE BOY S BOOK OF BACKYARD CAMPING. '70

STACKPOLE BOOKS. HARRISBURG, PA. 17105. 1968. $4.50.
THIS IS A THOROUGH, WELL-ORGANIZED RESOURCE BOOK FOR YOUNG BOYS AND TEACHERS. A WHOLE RANGE OF IDEAS ARE INCLUDED. COMPARING TENTS, FOOD PREPARATION, TAKING CARE OF EQUIPMENT, BASIC CAMPING SKILLS, GAMES, AND SAFETY RULES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
LARRY IS A SURVIVAL INSTRUCTOR OF THE HIGHEST ORDER. HE HAS A GREAT DEAL OF EXPERIENCE IN THE OUTDOORS. HE ACCEPTS NATURE FOR WHAT IT IS, AND WORKS WITH IT, NOT AGAINST IT.

91. BOOK. HAMMETT, CATHERINE T. YOUR OWN BOOK OF CAMPCRAFT. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. 1950. ABOUT $2.00.
A VERY GOOD GUIDE FOR YOUNG CAMPERS. STIMULATES INTERESTS. WELL WRITTEN. COVERS ALL PHASES OF CAMPING, INCLUDING CAMPING MANNERS.

92. BOOK. HOLDEN, JOHN L. THE YOUNG SPORTSMAN S GUIDE TO CAMPING. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. $1.00.
COVERS ALL FACETS OF CAMPING EXPERIENCE. GEARED TO YOUNG CAMPER. BASIC SKILLS FOR A GOOD CAMPING EXPERIENCE.

97. RESOURCE PERSON. JOHN E. CARTER, SR. HONEOYE FALLS, NY 14472. SCOUTMASTER FOR 15 YEARS, HAS BEEN HIKING AND BACKPACKING FOR YEARS WITH BOYS FROM 11 YRS TO 16 YRS. KNOWS ALL THE SCOUTING CAMPING TRICKS, AND HAS A GOOD RELATIONSHIP WITH BOYS. PHONE - 716/624-2321.

104. RESOURCE. NEW YORK STATE OUTDOOR EDUCATION ASSOCIATION, BOX 42, ALBANY, NY. 12201.
ALL KINDS OF INFORMATION ON OUTDOOR EDUCATION - OBJECTIVES, ACTIVITIES, MATERIALS.

106. RESOURCE. NEW YORK STATE EDUCATION DEPT. ALBANY, NY 12224.
THIS DIVISION CAN PROVIDE MATERI LS USEFUL IN PLANNING ACTIVITIES IN THE OUT-OF-DOORS.

111. BOOK. RIVIERE, WILLIAM. THE CAMPER S BIBLE. DOUBLEDAY AND CO. NEW YORK, NY 1970. $1.95.
THIS IS A VERY COMPREHANSIVE GUIDE, INCLUDING THE FOLLOWING TOPICS - TENTS AND HOW TO BUY THEM, CHOOSING A CAMPSITE, THE CAMPFIRE, COOKING STOVES, SLEEPING GEAR, PACKS AND PACKING, CLOTHES, USE OF MAP AND COMPASS, SAFETY, CANOES, AND WEATHER. IT ALSO LISTS PLACES TO WRITE FOR CAMPING INFORMATION.

112. BOOK. MACFARLAN, ALLAN A. THE BOY S BOOK OF HIKING. STACKPOLE BOOKS, HARRISBURG, PA 17105. $4.50.
A GOOD BOOK OF CAMPING BASICS - COOKING, DRESS, SAFETY, HEALTH, COMPASS WORK.

113. BOOK. BALE, R. O. WHAT ON EARTH. AMERICAN CAMPING ASSOCIATION, MARTINVILLE, INDIANA 46151. $3.95.
BACKGROUND KNOWLEDGE OF EARTH RE OURCES. FOSSILS, HISTORY, FIRE MAKING, MAP MAKING, COMPASS READING, FISHING, WEATHER, PLANTS, STREAM EXPLORATION. VERY GOOD FOR NATURE STUDY.

114. BOOK. MANDOLF, HENRY I. BASIC MOUNTAINEERING. 1050 MILLS TOWER 220 BUSH ST., SAN FRANSISCO, CALIF. 94104. $3.95.
BASIC SKILLS IN HIKING AND MOUNTAINEERING. EQUIPMENT, ALPINE CAMPING AND COOKING, ORIENTATION, WEATER, CLIMBING MISERIES AND

FIRST AID, MOUNTAIN TRAVEL, ROCK CLIMBING, WINTER TRAVEL AND SNOW CLIMBING. GLACIER TRAVEL, DESERT TRAVEL, RESCUE, AND RECOMMENDED LITERTURE.

115. BOOK. KEPHART, HORACE. CAMPING AND WOODCRAFT. THE MACMILLAN CO. RIVERSIDE, NY 08075. $6.95.
HAS MUCH PRACTICAL NATURE LORE. HAS INFORMATION WHICH IS AVAILABLE IN FEW OTHER PLACES. FIRST PRINTING - 1916. ALSO NOSTALGIC.

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117. RESOURCE. AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION. COLLEGE OF EDUCATION, MICHIGAN STATE UNIVERSITY, EAST LANSING MICHIGAN 48823.
ALL SORTS OF INFORMATION - BOOKS, FILMS, RECORDS, ACTIVITIES DEALING WITH OUTDOOR EDUCATION.

123. BOOK. MCNALLY, TOM. CAMPING FOR BOYS AND GIRLS. FOLLETT PUBLISHING CO. CHICAGO, ILL. 1966.
A GOOD BOOK THAT DISCUSSES ALL ASPECTS OF CAMPING FROM EQUIPMENT TO SAFETY AND COURTESY. A SECTION IS DEVOTED TO WHERE AND HOW TO SET UP CAMP, CAMP COOKING AND CARE OF EQUIPMENT.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
THIS IS AN EXCELLENT BOOK COVERING EVERY ASPECT OF A CAMPING EXPERIENCE. ANGIER DISCUSSES CLOTHING, BACKPACKING, FORECASTING THE WEATHER FROM NATURE, FIRES, SHELTERS, WAYS TO TRAVEL AND GATHERING AND PREPARING FOOD. USEFUL AS COMPLETE GUIDE.

165. BOOK. COLBY, C. B. SURVIVAL - TRAINING IN OUR ARMED FORCES. COWARD-MCCANN INC. 1965. $2.52.
MANY PICTURES. EXPLAINATION OF ARMY SURVIVAL TRAINING. EMPHASIZES BASIC NEEDS, AND PRIORITIES OF SURVIVAL.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

190. BOOK. JAUSS, ANNE MARIE. DISCOVERING NATURE THE YEAR AROUND. E. P DUTTON AND CO. NEW YORK, NY. $3.25.
A NATURE STUDY BOOK DIVIDED INTO UNITS OF STUDY BY THE MONTHS OF THE YEAR. REINFORCES THE TIME CONCEPT ACCORDING TO NATURE CHANGES, ANIMAL MOVEMENT AND PLANT GROWTH. INCLUDES MANY CAREFUL AND DETAILED SKETCHES OF PLANTS AND ANIMALS.

EASURING DEVICES

23. THE CHILD SHOULD BE ABLE TO DEMONSTRATE SELF RELIANCE IN HIS ABILITY, TO BUILD A FIRE BY FINDING TINDER, ASSEMBLING KINDLING AND FUEL AND CREATING A CLEARED AREA, SURROUNDED BY NON-COMBUSTABLE MATERIAL, AND STARTING A FIRE BY USING NO MORE THAN 5 WOODEN MATCHES. THE FIRE SHOULD BURN AT LEAST 30 MINUTES.

72

UNIT TITLE - IT IS IN TO BE OUT

REQUESTOR NAME - RALPH R. DYKSTRA

OBJ. 12

12. TO DEMONSTRATE UNDERSTANDING OF ROPE WORK.

CONTENT OUTLINE

17. MANY PEOPLE HAVE DIFFICULTY IN TYING KNOTS. THIS CAN BE AVOIDED IF THE PRINCIPLES BEHIND A KNOT ARE EXPLAINED. WHAT IS A CERTAIN KNOT GOOD FOR AND WHERE ARE ITS STRONG POINTS. SOME KNOTS ARE STRONGER THAN OTHERS, BUT SOME ARE JUST AS ABLE TO DO THE JOB. FIND OUT WHICH AR BEST AND MASTER THESE FEW.

55. TEACHER RESOURCE. HARRIS, DOROTHY V., VAN DER SMISSEN, BETTY. HOW TO IMPRIVE YOUR CAMPCRAFT - SERIES ONE. THE ATHLETIC INSTITUTE MERCHANDISE MART. $.75 FOR BOOK.
BOOK WAS MADE FROM FILMSTRIP. FILMSTRIP IS AVAILABLE FROM ABOVE ADDRESS. PICTURES AID NON-READE .

57. TEACHER RESOURCE. RUTSTRUM, CALVIN. THE NEW WAY OF THE WILDERNESS. THE MACMILLAN COMPANY. 1963. PURCHASE - $4.95.
A GO D TEACHER RESOURCE BOOK ON WILDERNESS COOKING, EQUIPMENT, CLOTHING, COMPASS POINTS, WINTER CAMPING, CANOEING AND BACKPACKING.

67. TEACHER RESOURCE. CHAPPELL, WALLACE EDWIN. WHEN YOU GO TRAIL CAMPING. DIVISION OF LOCAL CHURCH. GENERAL BOARD OF EDUCATION OF THE UNITED METHODIST CHURCH. $. 75.
RESOURCE PAMPLET FOR PLANNING HIKING TRIPS FOR YOUNG ADULTS. ORGANIZES GROUP RESPONSIBILITIES AND ADMINISTRATIVE PLANNING. INCLUDES HIKING SKILLS, TRAIL EQUIPMENT, FOODS, HEALTH, PACK ANIMALS. BICYCLES, SAMPLE MENUS, FOOD LISTS, CHECKLISTS, BIBLICGRAPHY, AND ADDRESSES OF ORGANIZATIONS.

68. TEACHER RESOURCE. CARDWELL, PAUL JR. AMERICA S CAMPING BOOK. CHARLES SCRIBBNER S AND SONS. 1969. $10.00.
ENCYCLOPEADIA REFERENCE OF ALL ASPECTS OF CAMPING. SECTION ON WILDERNESS CAMPING INCLUDES PATTERNS FOR MAKING TENTS, PACKS SOPHISTICATED COMPARISON OF EQUIPMENT. GLOSSERY AND BIBLIOGRAPHY OF CAMPS, ORGANIZATIONS, AND HELPFUL BOOKS.

74. TEACHER RESOURCE. COLBY AND ANGIER. THE ART AND SCIENCE OF TAKING TO THE WOODS. THE STACKPOLE CO.
A GOOD ENCYCLOPEDIA ABOUT OUTDOOR LIVING. MORE READING THAN ILLUSTRATIONS, BUT VERY INFORMATIVE. CONTAINS EVERYTHING FROM SLEEPING BAGS TO INSECT CONTROL, EMERGENCIES AND KNOT TYING.

75. TEACHER RESOURCE. BROWER, DAVID. THE SIERRA CLUB WILDERNESS HANDBOOK. BALLANTINE BOOKS, INC.
AN EXCELLENT RESOURCE BOOK. EVERY ASPECT OF WILDERNESS CAMPING IS INCLUDED - FOOD, OUTDOOR MEDICINE, EQUIPMENT, ETC. ALSO HAS MAPS, CHARTS, AND DRAWIINGS.

79. TEACHER RESOURCE. SIERRA CLUB. 250 WEST 57TH STREET, NEW YORK, NEW YORK 10019. COST DEPENDS ON WHAT MATERIAL IS REQUESTED AND QUALITY. THE SIERRA CLUB IS A MOUNTAIN CLIMBING ORGANIZATION, BUT ALSO PARTICIPATES IN HIKING AND CAMPING. EXCELLENT BOOKS ARE AVAILABLE AS WELL AS COLORFUL POSTERS.

86. TEACHER RESOURCE. OLSEN, LYNN. 58 WORLDS AROUND US. JULY 1972.

DECUSSES PREPARATION FOR TRIPS. STUDENT INVOLVMENT IN PLANNING, MAP READING, LEARNING BY DOING EMPHASIZED.

88. TEACHER RESOURCE. CHAPPEL, LINDA LEE. SCHOOL FOREST - AN OUTDOOR CLASSROOM.
SHORT DESCRIPTION OF MADISON WISCONSIN S OVERNIGHT NATURE STUDY.

91. TEACHER RESOURCE. PROJECT ADVENTURE. HAMILTON WENHAM REGIONAL SCHOOL DISTRICT.
THIS IS THE APPLICATION OF THIS SCHOOL DISTRICT FOR TITLE III FUNDS. CONTAINS ALL ASPECTS OF PROGRAM DEVELOPMENT, FINANCING AND PROPOSED EXPERIENCE.

93. TEACHER RESOURCE. BALE, ROBERT O. OUTDOOR LIVING. BRUGESS PUBLISHING CO.
EXCELLENT AND THOROUGH BOOK ON OUTDOOR SKILLS. ILLUSTRATED. IMPORTANT CHAPTER ON SURVIVAL CAMPING.

108. TEACHER RESOURCE. VAN DER SMISSEN, BETTY AND GOERING, OSWALD H. A LEADER S GUIDE TO NATURE - ORIENTATED ACTIVITIES. IOWA STATE UNIVERSITY PRESS. 1965. PURCHASE - $3.98
GOOD COMPREHENSIVE REFERENCE FOR NATURE GAMES, NATURE CRAFTS AND OUTDOOR LIVING SKILLS. DETAILED DIRECTIONS FOR MANY ACTIVITIES.

111. TEACHER RESOURCE. CAMPING. GOLDEN HANDBOOKS. GOLDEN PRESS, NEW YORK. PURCHASE - $3.50
CLEAR, CONCISE INFORMATION. INFORMATIVE ILLUSTRATIONS AND DIAGRAMS.

GROUP ACTIVITIES

109. CLOTHSLINE WITHOUT CLOTHESPINS. MATERIALS - 2 OR 3 ROPES, ONE LONGER THAN THE OTHER.
- LAY THE ROPES ON THE GROUND SIDE BY SIDE
- HOLD THE ROPES AS IF THEY WERE ONE ROPE AND TIE ONE END TOGETHER WITH AN OVERHAND KNOT
- NOW BRAID THE ROPES IF YOU HAVE THREE ROPES. TWIST THEM IF YOU HAVE TWO
- TIE AN OVERHAND KNOT AT THE OPEN END
- ATTACH CLOTHESLINE TO TREES OR POSTS WITH CLOVE HITCHES OR BOW LINE KNOTS
- HANG CLOTHES, TOWELS, ETC. ON THE LINE BY CATCHING THEM BETWEEN THE TWISTED OR BRAIDED ROPES.

161. CHAIN GANG RACE. ON SIGNAL, CHILD NO. 1 TIES A ROPE AROUND HIS ANKLE WITH A BOWLINE AND HANDS THE END TO THE SECOND CHILD. THE SECOND CHILD TIES HIS ROPE ON TO THE FIRST CHILD S WITH A SQUARE KNOT, THEN TIES ROPE TO HIS OWN ANKLE WITH A CLOVE HITCH AND HANDS LOOSE END TO THE THIRD CHILD WHO REPEATS THE PROCEDURE. WHEN ALL ARE TIED TOGETHER THE TEAM RACES TO THE FINISH LINE. ONE ROPE PER CHILD IS NEEDED.

167. CUT EACH STUDENT AN EQUAL LENGTH OF ROPE. DIVIDE INTO GROUPS OF FOUR OR FIVE. HAVE THE STUDENTS SIT IN A CIRCLE HOLDING THEIR ROPES. EACH CHILD MAKES A SQUARE KNOT TYING HIS ROPE TO THE CHILD S ROPE ON HIS LEFT. THERE SHOULD BE ONE BIG ROPE CIRCLE. TO TEST WHETHER THE KNOTS WERE MADE CORRECTLY LIFT THE ROPE OVER TO THEIR BACKS. AT A SIGNAL EVERYONE LEANS BACK. IF THE KNOTS ARE MADE CORRECTLY NO ON WILL FALL.

188. KNOT TYING. DIVIDE CLASS INTO TWO GROUPS. HAVE 4 FEET LENGTHS OF ROPE FOR EACH CHILD. ON COMMAND HAVE THE STUDENTS TIE FOLLOWING KNOTS IN THIS ORDER -

- SQUARE KNOT
- SHEET BEND
- FISHERMAN S KNOT
- CLOVE HITCH
- TWO HALF HITCHES
- TIMBER HITCH
- TA T LINE HITCH
- BOWLINE

332. USE MILKWEED, INNER BARK OF ELM, HICKORY, OR BASSED TO TWIST 10 FEET OR MORE OF FISHLINE. TO MAKE LINE, HOLD 2 PIECES OF FIBER OF UNEQUAL LENGTHS TOGETHER AND TIE AN OVERHAND KNOT IN ONE END. LOOP THE KNOT OVER A PEG AND HOLD ONE PIECE IN EACH HAND BETWEEN THUMB AND FOREFINGER. MAKE A SAFETY PIN HOOK, THEN HOCK, OR TOGGLE AND TIE TO THE LINE.

344. BUILD A THREE POLE TRIPOD ON WHICH A TIGHT CIRCLE OF POLEN IS STACKED FORMING A LARGE TEPEE. OVER THIS FORM IS PLACED A THATCHING OF GRASS, LEAVES, REEDS, BARK, ROTTEN WOOD, AND DIRT. THE ENTRANCE CAN BE LARGE OR SMALL FOR PROTECTION FROM THE WIND. WALLS CAN ALSO BE MADE BY LASHING TARPS TOGETHER, OR USING AN OLD PARACHUTE.

348. GAME. HAVE CHILDREN SET UP A SMALL TENT WITH EYES BLINDFOLDED OR WITHOUT USING HANDS.

362. CREEK CROSSING. DISCUSS AND EMPLOY MOST EXPEDIATE TYPE OF CREEK CROSSING. INCLUDE HOPPING ROCKS, USING FALLEN TREES, MAKING A BRIDGE, A RAFT, OR A MORE COMPLICATED CHOICES LIKE A TROYOLIAN TRAVERSE OF ROPES, A BURNO MA BRIDGE, OR A COMMANDO BRIDGE.

364. DEMONSTRATE DIFFERENT METHODS OF COILING A ROPE. COIL AROUND THE KNEES AND FEET, COIL FROM THE HAND TO THE ELBOW.

384. FOR A LENGTHIER SHELTER DRIVE 2 PARALLEL ROWS OF STAKES IN THE GROUND ABOUT A FOOT APART. LEAN WILLOW STICKS ALONG THE STAKES TO FORM A FAIRLY TIGHT MESH, THEN STUFF GRASS BETWEEN THE TWO WOVEN WALLS. THE RESULT IS A THICK INSULATED WALL THAT WILL STOP ANY COLD. THE ROOF IS SIMPLY MADE OF POLES AND WILLOWS WITH GRASS THATCHING PILED ON TOP. HEAVY WILLOW RODS AND BRUSH PILED ON TOP OF THE GRASS WILL KEEP THE WIND FROM BLOWING IT AWAY.

399. PRACTICE CLIMBING MOUNTAINS BY STARTING ON HILLS. USE A SAFETY LINE OR BELAY LINE ON THE CLIMBER. TAKE TURNS ON BELAY LINE. PRACTICE REPELING ON GRADUALLY STEEPING S OPES.

400. TO MAKE CORD -
- STINGING NETTLE - THE STALK HAS A STRONG FIBER. POUND THE DRIED STALK AND REMOVE THE WOOD PARTS.
- MILKWEED - USE THIS WHEN DRY.

404. CLIMBING SKILLS - ROPE. IN AREAS WHERE THERE IS STURDY GRANITE ROCK IT IS POSSIBLE TO TEACH CLIMBING. FIRST OF ALL, MAKE SURE THAT A ROPE IS ALWAYS USED FOR SAFETY. SECURE THE ROPE AT THE TOP WITH A BOLINE KNOT. NEXT AT THE POSITION WERE A PERSON WILL BELAY THE INDIVIDUAL CLIMBING TIE A FIGURE-EIGHT. THIS SHOULD BE LARGE ENOUGH FOR A PERSON TO FIT INTO. NEXT TIE THE PERSON AT THE BOTTOM WITH A BOLINE.

413. TAKE A ROPE WALK OR HAND CHAIN WALK THROUGH THE SCHOOL OR ON THE PLAYGROUND. SET UP AN OBSTACLE COURSE WITH FURNITURE OR PLAYGROUND EQUIPMENT AS A TRAIL ON THE WALK. STRESS THE NEED FOR COOPERA-

TION, TRUST, SINGLE FILE WALKING SO THAT WALKING IN THE WOODS OR STAYING AT CAMP BECOMES A LESS FEARFUL ACTIVITY.

455. AFTER STUDENTS ARE THOROUGHLY FAMILIAR WITH AND ABLE TO TIE SEVERAL KINDS OF KNOTS, PLAY A GAME OF MYSTERY KNOT . THE CHILD WHO IS IT CHOOSES A PARTNER WHO WILL TIE THE MYSTERY KNOT. IT THEN GIVES HIS PARTNER ONLY VERBAL DIRECTIONS ON HOW TO TIE A CERTAIN KNOT. WHEN THE PARTNER SUCCESSFULLY TIES THE KNOT IT DESCRIBED, THE PARTNER BECOMES IT AND THE GAME CONTINUES.

533. HAVE A SCOUT WHO HAS A MERIT BADGE FOR ROPE WORK DEMONSTRATE THE BASIC KNOT TYING AND EXPLAIN THE KNOT S FUNCTION TO THE CLASS. SOME TO INCLUDE WOULD BE - SQUARE KNOT FOR JOINING ENDS OF ROPE, SHEET KNOT FOR JOINING ENDS OF ROPE, CLOVE HITCH FOR SECURING A ROPE TO A POLE, BOWLINE FOR MAKING A LOOP THAT WILL NOT PULL TIGHT. PRESENT SITUATIONS TO CHILDREN WHICH REQUIRE TYING OR LASHING TO COMPLETE AND HAVE THEM IDENTIFY THE TYPE OF KNOT USED. ILLUSTRATE USING SITUATIONS SUCH AS PUTTING UP A TENT, TYING A BOAT TO A DOCK, RESCUING A - STRANDED HIKER, BANDAGING A WOUND OR MAKING A RAFT.

535. CHILDREN WILL DEVISE A WAY TO SUSPEND A DUFFLE BAG CONTAINING FOOD AND EQUIPMENT ABOVE THE GROUND FOR NIGHT STORAGE. ONE POSSIBILITY IS TO TIE A ROPE AT THE MOUTH OF THE DUFFLE BAG AND PULL IT OVER A HIGH BRANCH OF A TREE AND TIE IT TO THE TRUNK USING A CLOVE HITCH KNOT.

536. PUT UP A CLOTHESLINE AT CAMP. DEMONSTRATE A PRACTICAL KNOT USEFUL IN HOLDING THE LINE TAUNT. OTHER ROPE TYING ACTIVITIES MIGHT INCLUDE TYING SHOE STRINGS, BANDAGING, SECURING GUY WIRES, WRAPPING PACKAGES, MAKING CRAFT ARTICLES LIKE BELTS, BAGS, OR NETS. KNOTS USED IN THESE ACTIVITIES ARE THE BASIC TYPES - BENDS, HITCHES, SLINGS, AND SPLICES SHOWN IN SCOUT MANUALS.

537. USE MATERIALS FOUND OUT-OF-DOORS TO MAKE SIMPLE TOOLS SUCH AS A HAMMER AND A SHOVEL. CHILDREN WILL SELECT A ROUND ROCK FOR A HAMMER HEAD AND A FLAT ROCK FOR THE SHOVEL BLADE. STURDY BRANCHES ABOUT ONE TO TWO INCHES IN DIAMETER AND 12-24 INCHES IN LENGTH SHOULD BE USED FOR HANDLES. THE ROCKS MAY BE LASHED TO THE BRANCHES WITH TWINE. ROCKS SHOULD BE SELECTED WHICH HAVE NATURAL NOTCHES WHICH WILL MAKE LASHING EASIER. A COMBINATION OF SQUARE AND PARALLEL LASHING IS USED. HAMMER MAY BE USED TO DRIVE TENT PEGS INTO THE GROUND. SHOVEL MAY BE USED FOR CLEARING CAMP FIRE SITE.

538. IN AN OPEN SPACE IN SCHOOL OR THE ROOM, HAVE THE CHILDREN ERECT A SMALL TENT, SUCH AS A GIRL SCOUT TENT OR PUP TENT. THEY SHOULD BE ABLE TO NAME THE PARTS OF A TENT AND BRIEFLY DESCRIBE THEIR FUNCTION. THE CHILDREN SHOULD LEARN HOW TO TIE DOWN THE GUY WIRES INTO THE STAKES TAPE OR NAIL TO FLOOR IF PERMITTED , HOIST THE TENT POLES AND LEARN TO ROLL THE FLAPS DOORS AND WINDOWS . THEY SHOULD ALSO KEEP THE TENT TRIM AND CLEAN FOR A WEEK. AT THE END OF THE WEEK, THE TENT SHOULD BE CLEANED, TAKEN DOWN, A D PACKED AS PRACTICE FOR BRAKING CAMP. FOLLOW UP AT CAMP WITH ERECTION OF TENT, INDEPENDENT OF THE TEACHER S DIRECTION.

556. TAKE A WALK ALONG A NATURE TRAIL IN THE RAIN. LOCATE A SPOT WHICH HAS REMAINED PARTIALLY DRY. CHILDREN PLAN AND IMPLEMENT THE IMPROVEMENT OF THIS SPOT AS A SHELTER BY LASHING PINE BOUGHS OR OTHER NATURAL MATERIAL TOGETHER TO FORM A ROOF OR WALL.

559. BUILD A SIMPLE TREE HOUSE FROM NATURAL MATERIALS. LOCATE A TREE

WHICH HAS A NATURAL NOCK AND/OR A BROAD BRANCH TO SERVE AS THE FLOOR OF THE TREE HOUSE. TIE OR LASH FINE BOUGHS, BRANCHES AND TWIGS TO THE OVERHANGING BRANCHES TO IMPROVE THE SHELTER OF THE TREE. SAFETY RULES MUST BE STRESSED. CHILDREN MUST NOT OVER CROWD THE TREE HOUSE AND MUST CAREFULLY ASCEND AND DESCEND THE TREE.

MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943.
LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

4. BOOK. COLBY, C. B. FIRST CAMPING TRIP. COWARD-MC CANN, INC. NEW YORK, NY 1955.
RESOURCE BOOK. DRAWINGS WITH CAPTIONS. COVERS ALL SKILLS OF WILDERNESS CAMPING.

7. BOOK. LINDHOLM, LT. COLONEL MAUND A. GUIDE FOR YOUNG CAMPERS. HART PUBLISHING CO. NEW YORK, NY. 1961. $3.95.
A WELL ILLUSTRATED STEP BY STEP GUIDE TO CAMPING. INCLUDES CHECK LISTS FOR PLANNING OUTDOOR ACTIVITIES. COVERED IN BOOK IS - CLOTHES FOR CAMPING, SHELTERS, FOIL COOKERY, WIRE CRAFT, TREE IDENTIFICATION, SANITATION, TRAIL MARKS, BEDDING DOWN, AND WOODCRAFT.

28. REALIA. ALPINE CORD. AVAILABLE THRCUGH HARDWARE STORE OR SPORTING GOODS STORE. APPROXIMATELY $1.00 PER 50 FT.
THIS CORD IS GOOD FOR LASHING AND SETTING UP TARPS. IT S STRONG, LIGHTWEIGHT AND IT IS NOT AFFECTED BY THE ELEMENTS.

55. REALIA. ROPE. GOLD LINE AVAILABLE THRCUGH SPORTING GOODS STORE. APPROXIMATE PRICE - 1/4 INCH - 8 PER FT., 1/16 INCH - 20 PER FT. 1/4 INCH IS NECESSARY FOR MAKING SLINGS. 1/16 INCH IS NECESSARY FOR CLIMBING, REPELLING.
NYLON ROPE IS MUCH BETTER FOR CLIMBING SINCE IT HAS GREATER RESILIANCY. HOWEVER, CAUTION SHOULD BE USED WHENEVER FRICTION IS A FACTOR. NYLON WILL BURN.

68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201. CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
NEW YORK HAS AN EXCELLENT CONSERVATION DEPARTMENT. THEY CAN PROVIDE SPEAKERS, CAMPSITES, AND INFORMATION ON WHERE TO GO TO ACCOMPLISH A SPECIFIC OBJECTIVE. THEY WILL ALSO FURNISH AND WORK WITH YOU IN ENCOURAGING CONSERVATION PROJECTS.

72. BOOK. BAKER, ELIZABETH. TAMMY CAMPS IN THE ROCKY MOUNTAINS. HOUGHTON MIFFLIN CO. BOSTON. 59 PGS. $2.95.
TAMMY S INTEREST IN PHOTOGRAPHY GETS HER INTO A PREDICAMENT. CLIMBING AND CAMPING ADVENTURES ARE ESSENTIALS IN THE STORY.

78. BOOK. MACFARLAN. THE BOY S BOOK OF OUTDOOR DISCOVERY. STACKPOLE BOOKS. HARRISBURG, PA. 17105. $4.50.
ACTIVITIES FOR LEARNING CAMP SKILLS. CHAPTERS 1 - 6 AND 9 HELPFUL. SIMPLE EXERCISES IN ORIENTATION, AND NATURE STUDIES WHICH CHILDREN CAN DO INDEPENDENTLY.

86. BOOK. MACFARLAN, ALLEN A. THE BOY S BOOK OF BACKYARD CAMPING. STACKPOLE BOOKS. HARRISBURG, PA. 17105. 1968. $4.50.
THIS IS A THOROUGH, WELL-ORGANIZED RESOURCE BOOK FOR YOUNG BOYS AND

TEACHERS. A WHOLE RANGE OF IDEAS ARE INCLUDED. COMPARING TENTS, FOOD PREPARATION, TAKING CARE OF EQUIPMENT, BASIC CAMPING SKILLS, GAMES, AND SAFETY RULES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
LARRY IS A SURVIVAL INSTRUCTOR OF THE HIGHEST ORDER. HE HAS A GREAT DEAL OF EXPERIENCE IN THE OUTDOORS. HE ACCEPTS NATURE FOR WHAT IT IS, AND WORKS WITH IT, NOT AGAINST IT.

91. BOOK. HAMMETT, CATHERINE T. YOUR OWN BOOK OF CAMPCRAFT. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. 1950. ABOUT $2.00.
A VERY GOOD GUIDE FOR YOUNG CAMPERS. STIMULATES INTERESTS. WELL WRITTEN. COVERS ALL PHASES OF CAMPING, INCLUDING CAMPING MANNERS.

92. BOOK. HOLDEN, JOHN L. THE YOUNG SPORTSMAN S GUIDE TO CAMPING. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. $1.00.
COVERS ALL FACETS OF CAMPING EXPERIENCE. GEARED TO YOUNG CAMPER. BASIC SKILLS FOR A GOOD CAMPING EXPERIENCE.

97. RESOURCE PERSON. JOHN E. CARTER, SR. HONEOYE FALLS, NY 14472. SCOUTMASTER FOR 15 YEARS, HAS BEEN HIKING AND BACKPACKING FOR YEARS WITH BOYS FROM 11 YRS TO 16 YRS. KNOWS ALL THE SCOUTING CAMPING TRICKS, AND HAS A GOOD RELATIONSHIP WITH BOYS. PHONE - 716/624-2321.

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123. BOOK. MCNALLY, TOM. CAMPING FOR BOYS AND GIRLS. FOLLETT PUBLISHING CO. CHICAGO, ILL. 1966.
A GOOD BOOK THAT DISCUSSES ALL ASPECTS OF CAMPING FROM EQUIPMENT TO SAFETY AND COURTESY. A SECTION IS DEVOTED TO WHERE AND HOW TO SET UP CAMP, CAMP COOKING AND CARE OF EQUIPMENT.

128. BOOK. PARISH, PEGGY. LET S BE EARLY SETTLERS WITH DANIEL BOONE. HARPER AND ROW. NEW YORK, NY 1967. $3.97.
AN UNUSUAL CRAFT BOOK THAT HAS ACTIVITIES RELATED TO THE PIONEER ERA. DIRECTIONS ARE EXPLICIT WITH GOOD ILLUSTRATIONS.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
THIS IS AN EXCELLENT BOOK COVERING EVERY ASPECT OF A CAMPING EXPERIENCE. ANGIER DISCUSSES CLOTHING, BACKPACKING, FORECASTING THE WEATHER FROM NATURE, FIRES, SHELTERS, WAYS TO TRAVEL AND GATHERING AND PREPARING FOOD. USEFUL AS COMPLETE GUIDE.

165. BOOK. COLBY, C. B. SURVIVAL - TRAINING IN OUR ARMED FORCES. COWARD-MCCANN INC. 1965. $2.52.
MANY PICTURES. EXPLAINATION OF RMY SURVIVAL TRAINING. EMPHASIZES BASIC NEEDS, AND PRIORITIES OF SURVIVAL.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

MEASURING DEVICES

48. STUDENT WILL TEACH ONE KNOT TO ANOTHER STUDENT. THE STUDENT WHO WAS JUST TAUGHT SHOULD BE ABLE TO DEMONSTRATE KNOT SUCCESSFULLY TO OTHERS. PUT A TIME LIMIT ON INSTRUCTION AND HAVE THE KNOT DEMONSTRATION THE FOLLOWING DAY.

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OBJ. 16

16. TO UTILIZE BASIC ORIENTATION SKILLS.

CONTENT OUTLINE

23. BRING A COMPASS - THAT S THE FIRST RULE - THEN A MAP. IF FOR SOME REASON YOU GET LOST LEARN HOW TO TELL DIRECTION FROM THE STARS, SUN AND THE MOON. TEACH THE CHILDREN TO FOLLOW ROADS IF THEY GET LOST OR GO DOWNSTREAM. IF SOMEONE KNOWS THAT YOU ARE OUT THERE IT IS BEST TO STAY IN ONE PLACE.

24. GIVE THE CHILDREN SOME PRACTICE WITH A COMPASS AT SCHOOL BEFORE YOU THRUST THEM INTO THE WOODS. BE SURE THEY KNOW HOW TO USE IT AS DIRECTION CAN BE A CONFUSING CONCEPT FOR ONE SO YOUNG.

55. TEACHER RESOURCE. HARRIS, DOROTHY V., VAN DER SMISSEN, BETTY. HOW TO IMPRIVE YOUR CAMPCRAFT - SERIES ONE. THE ATHLETIC INSTITUTE MERCHANDISE MART. $.75 FOR BOOK.
BOOK WAS MADE FROM FILMSTRIP. FILMSTRIP IS AVAILABLE FROM ABOVE ADDRESS. PICTURES AID NON-READER.

57. TEACHER RESOURCE. RUTSTRUM, CALVIN. THE NEW WAY OF THE WILDERNESS. THE MACMILLAN COMPANY. 1963. PURCHASE - $4.95.
A GOOD TEACHER RESOURCE BOOK ON WILDERNESS COOKING, EQUIPMENT, CLOTHING, COMPASS POINTS, WINTER CAMPING, CANOEING AND BACKPACKING.

65. TEACHER RESOURCE. MAP INFORMATION SERVICE. U.S. GEOLOGICAL SURVEY, DEPT. OF THE INTERIOR, WASHINGTON, DC. ASK FOR MAP GUIDE. IT WILL THEN LIST NUMBERS FOR A PARTICULAR AREA. SEND THESE BACK IN AND THEY WILL SEND APPROPRIATE MAPS. IF USED RIGHT THESE ARE GREAT IN DETERMINING TERRAIN CONDITIONS. THEY ALSO ARE USEFUL IF YOU GET LOST.

67. TEACHER RESOURCE. CHAPPELL, WALLACE EDWIN. WHEN YOU GO TRAIL CAMPING. DIVISION OF LOCAL CHURCH. GENERAL BOARD OF EDUCATION OF THE UNITED METHODIST CHURCH. $.75.
RESOURCE PAMPLET FOR PLANNING HIKING TRIPS FOR YOUNG ADULTS. ORGANIZES GROUP RESPONSIBILITIES AND ADMINISTRATIVE PLANNING. INCLUDES HIKING SKILLS, TRAIL EQUIPMENT, FOODS, HEALTH, PACK ANIMALS. BICYCLES, SAMPLE MENUS, FOOD LISTS, CHECKLISTS, BIBLIOGRAPHY, AND ADDRESSES OF ORGANIZATIONS.

68. TEACHER RESOURCE. CARDWELL, PAUL JR. AMERICA S CAMPING BOOK. CHARLES SCRIBBNER S AND SONS. 1969. $10.00.
ENCYCLOPEADIA REFERENCE OF ALL ASPECTS OF CAMPING. SECTION ON WILDERNESS CAMPING INCLUDES PATTERNS FOR MAKING TENTS, PACKS SOPHISTICATED COMPARISON OF EQUIPMENT. GLOSSERY AND BIBLIOGRAPHY OF CAMPS, ORGANIZATIONS, AND HELPFUL BOOKS.

74. TEACHER RESOURCE. COLBY AND ANGIER. THE ART AND SCIENCE OF TAKING TO THE WOODS. THE STACKPOLE CO.
A GOOD ENCYCLOPEDIA ABOUT OUTDOOR LIVING. MORE READING THAN ILLUSTRATIONS, BUT VERY INFORMATIVE. CONTAINS EVERYTHING FROM SLEEPING BAGS TO INSECT CONTROL, EMERGENCIES AND KNOT TYING.

75. TEACHER RESOURCE. BROWER, DAVID. THE SIERRA CLUB WILDERNESS HANDBOOK. BALLANTINE BOOKS, INC.
AN EXCELLENT RESOURCE BOOK. EVERY ASPECT OF WILDERNESS CAMPING IS

INCLUDED - FOOD, OUTDOOR MEDICINE, EQUIPMENT, ETC. ALSO HAS MAPS, CHARTS, AND DRAWIINGS.

79. TEACHER RESOURCE. SIERRA CLUB. 250 WEST 57TH STREET, NEW YORK, NEW YORK 10019. COST DEPENDS ON WHAT MATERIAL IS REQUESTED AND QUALITY. THE SIERRA CLUB IS A MOUNTAIN CLIMBING ORGANIZATION, BUT ALSO PARTICIPATES IN HIKING AND CAMPING. EXCELLENT BOOKS ARE AVAILABLE AS WELL AS COLORFUL POSTERS.

86. TEACHER RESOURCE. OLSEN, LYNN. WORLDS AROUND US. JULY 1972. DECUSSES PREPARATION FOR TRIPS. STUDENT INVOLVMENT IN PLANNING, MAP READING, LEARNING BY DOING EMPHASIZED.

88. TEACHER RESOURCE. CHAPPEL, LINDA LEE. SCHOOL FOREST - AN OUTDOOR CLASSROOM.
SHORT DESCRIPTION OF MADISON WISCONSIN S OVERNIGHT NATURE STUDY.

91. TEACHER RESOURCE. PROJECT ADVENTURE. .HAMILTON WENHAM REGIONAL SCHOOL DISTRICT.
THIS IS THE APPLICATION OF THIS SCHOOL DISTRICT FOR TITLE III FUNDS. CONTAINS ALL ASPECTS OF PROGRAM DEVELOPMENT, FINANCING AND PROPOSED EXPERIENCE.

93. TEACHER RESOURCE. BALE, ROBERT O. OUTDOOR LIVING. BRUGESS PUBLISHING CO.
EXCELLENT AND THOROUGH BOOK ON OUTDOOR SKILLS. ILLUSTRATED. IMPORTANT CHAPTER ON SURVIVAL CAMPING.

114. TEACHER RESOURCE. JACK LONDON. TO BUILD A FIRE. BEST SHORT STORIES OF JACK LONDON. THE SUN DIAL PRESS, GARDEN CITY, NEW YORK. 1945.
EXCITING OUTDOOR ADVENTURE. DEPICTS A MAN S FIGHT FOR SURVIVAL AGAINST THE PERILS OF THE ARCTIC.

GROUP ACTIVITIES

6. EACH MORNING BEFORE CAMPING ACTIVITIES MAKE UP A SCHEDULE OF THE DAY S ACTIVITIES. HAVE THE CHILDREN TRY TO DETERMINE THE LENGTH OF TIME AND EQUIPMENT NEEDED FOR ACTIVITES AS PREPARING MEALS, CLEANING UP, COLLECTING FIREWOOD, ETC..

7. BEFORE LEAVING FOR AN OUTDOOR EXPERIENCE MAKE UP A LIST OF INDIVIDUAL RESPONSIBILITIES OR JOBS FOR EACH DAY. ASSIGN EACH CHILD SEVERAL JOBS EACH DAY SUCH AS FIRE BUILDING, LEANING UP, ACTIVITY LEADER, ETC.. STRESS THAT IT IS HAS RESPONSIBILITY TO CARRY OUT HIS JOB FOR HIS BENEFIT AND THE BENEFIT OF THE GROUP.

20. MEASURE THE DEPTH OF EROSION GULLIES USING KNOTTED STRING OR A TAPE MEASURE. STRING CAN BE KNOTTED AT 2 INCH, 5 INCH OR 10 INCH INTERVALS TO REINFORCE COUNTING BY 2 S, 5 S OR 10 S.

37. USE A COMPASS TO FIND OUT THE NSEW DIRECTIONS. CLEAR A SPACE IN THE MIDDLE OF THE ROOM AND MARK OFF DIRECTIONS. USE A BOLD LINE TO DESIGNATE N-S AND E-W. GIVE EACH DIRECTION ITS DEGREE READING. FOR MORE ADVANCED READINGS, THE FINER DEGREES CAN BE DRAWN IN. TEMPRA PAINT WITH A FEW DROPS OF LIQUID DETERGENT CAN BE WASHED OFF EASILY. IF PAPER OS USED FOR THE GRID, COVER IT WITH PLASTIC. HAVE THE CHILDREN DETERMINE THE DIRECTION OF THEIR DESKS, THE TEACHER S DESK. THE LOCATION OF THE FLAG, THE LIBRARY, ETC.. MAKE UP GAMES WHERE CHILDREN MOVE IN DIFFERENT DIRECTIONS.

39. MAKE A WATER COMPASS WITH A LARGE METAL BOBBY PIN, A LARGE MAGNET, SOME STRING, LARGE MOUTHED JAR, ENCIL AND SOME WATER. SPREAD APART BOBBY-PIN SO THAT IT IS FLAT. STROKE THE PIN OVER THE MAGNET. STROKE IN THE SAME DIRECTION ABOUT FIFTY TIMES UNTIL THE PIN IS MAGNETIZED. TEST WITH SOME IRON FILINGS IF NECESSARY. HANG PIN FROM PENCIL IN A JAR. ALLOW FOR FREE MOVEMENT OF THE PIN. FILL THE JAR WITH WATER. WATCH AS THE PIN POINTS TO THE NORTH.

40. MAKE VARIOUS HOMEMADE COMPASSES BOBBY PIN, BOBBY PIN AND WATER, CORK AND WATER AND COMPARE THEM TO AN ACCURATE STORE-BOUGHT COMPASS.
- WHICH COMPASS NEEDLE POINTS IN CLOSEST TO THE DIRECTION OF THE STORE BOUGHT COMPASS
- WHICH COMPASS ORIENTS ITSELF QUICKEST
- WHICH COMPASS STAYS ACCURATE FOR THE LONGEST TIME
- WHICH IS MORE CONVENIENT TO USE.

56. MEASURE A PERSON S PACE IN FEET. TAKE THE AVERAGE LENGTH OF FIVE PACES. DIVIDE LENGTH OF PACE INTO MILE TO FIND HOW MANY PACES IN A MILE FOR AN INDIVIDUAL.

64. FIND A FIELD OF TALL GRASS. CHILDREN SELECT LOCATIONS AT 25 - 50 FT. FROM EACH OTHER. AT A SIGNAL EVERYONE CRAWLS TO THE CENTER OF FIELD. MAKE UP ANIMAL CALLS FOR EACH INDIVIDUAL SO PEOPLE CAN KEEP TRACK. CRAWL BACK TO START BY FOLLOWING PREVIOUS PATH.

78. LOOK FOR SIGNS OF HUMAN HABITATION IN A RURAL SETTING. LOCK FOR ROWS OF TREES, OLD FOUNDATIONS, ABANDONED EQUIPMENT, DITCHES, BRIDGES, PATHS, OLD DUMPS, BURNT OUT AREAS. TALK TO OLD RESIDENTS ABOUT PREVIOUS LIVING. PHOTOGRAPH SIGNS. MAKE UP STORIES ABOUT PAST RESIDENTS AND THEIR HABITATION.

97. USING YOURSELF AS A MEASUREMENT -
- FIND ONE OF YOUR FINGER JOINTS THAT MEASURES ONE INCH. USE THIS MEASURE WHEN YOU LOOK FOR A STICK ONE INCH THICK
- PUT YOUR ARM OUT STRAIGHT AND HOLD A RULER AGAINST YOUR ARM WITH ONE END AT YOUR FINGERTIPS. WHERE DOES ONE FOOT, ONE YARD MEASURE TO.

98. HAVE EACH CHILD MAKE A CARD WITH HIS PERSONAL MEASUREMENTS ON IT. THESE CAN BE REFERRED TO WHEN MEASURING FOULND OBJECTS IN THE OUT-OF-DOORS. INCLUDE -
- HEIGHT
- FOOT LENGTH
- HAND SPREAD FROM THUMB TO LITTLE FINGER
- ARM SPREAD FROM HAND TO HAND
- THE HEIGHT YOU CAN REACH
- WHICH FINGER JOINT IS ONE INCH
- PACE.

103. MAP SKILLS. HAVE THE CHILDREN BRING IN ROAD MAPS AND DISCUSS THEIR USE. BEFORE LEAVING ON A FIELD TRIP OR CAMPING EXPERIENCE MAP OUT YOUR ROUTE AND HAVE EACH CHILD FOLLOW IT ON THEIR OWN MAP ALONG THE WAY.

116. FOLLOWING DIRECTIONS - COUNTING. HAVE AN OUTDOOR COUNTING GAME. CALL OFF THE FOLLOWING DIRECTIONS AND SEE WHO CAN BE THE FIRST TO FINISH. USE MORE OR FEWER DIRECTIONS ACCORDING TO ABILITY OF STUDENTS. WITH OLDER CHILDREN WRITE DIRECTIONS DOWN AND SEE WHO S FIRST TO FINISH -
- TAKE TWO STEPS FORWARD
- PICK UP FIVE DIFFERENT LEAVES
- PLACE SIX STICKS IN ORDER OF SIZE WITH THE SMALLEST FIRST AND

LARGEST LAST.

121. MARKING A TRAIL. DIVIDE THE CLASS INTO TWO GROUPS. HAVE ONE GROUP GO OUT AND MARK A TRAIL USING NATURAL OBJECTS. AFTER 15 - 20 MINUTES THE NEXT GROUP FOLLOWS THE MARKINGS. SOME GOOD MARKINGS ARE -
- TWO STONES ON TOP OF EACH OTHER MEANS KEEP GOING
- ONE LONG STICK AND 2 SHORT STICKS IN THE SHAPE OF AN ARROW MEANS GO THIS WAY
- MANY SMALL STONES IN A CIRCLE MEANS THE END OF THE TRAIL
- HAVE THE CLASS INVENT THEIR OWN TRAIL SIGNS AND MAKE UP A BOOKLET.

EMPHASIZE THAT ONLY NATURAL BIOGRADEABLE MATERIALS SHOULD BE USED. DO NOT PERMIT PAINTING ON OR GOUGES IN TREES.

129. DIVIDE THE CLASS INTO GROUPS AND HAVE THEM LINE UP AS IN A RELAY RACE. THE TEACHER CALLS OUT A SPECIFIC NATURE OBJECT AND ONE CHILD FROM EACH GROUPS RUNS TO THE OBJECT, TOUCHES IT AND RETURNS TO HIS GROUP. POINTS ARE SCORED ACCORDING TO THE ORDER OF FINISH. THE ACTIVITY IS REPEATED WITH THE TEACHER CALLING OUT DIFFERENT NATURE OBJECTS AND HAVING THE NEXT CHILD IN LINE RUNNING.

135. FIRE BUILDING AND WATER BOILING. TWO CHILDREN MAKE UP A TEAM. ON GO THEY PLACE A POT ON A SUITABLE SUPPORT, GATHER WOOD, STRIKE A MATCH OR USE FLINT AND A KNIFE, LIGHT FIRE AND KEEP IT GOING UNTIL WATER BOILS OVER EDGE OF POT. TEAM TO MAKE FIRE USING ONLY NATURAL MATERIALS AND THAT BOILS THE WATER OVER THE TOP OF THE POT WINS.

137. MAP READING RACE. DIVIDE CLASS INTO TEAMS. EACH TEAM IS GIVEN A SKETCH MAP SHOWING MAGETIC NORTH, SCALE AND TWO OBJECTS NOT FAR FROM THE STARTING POINT. THE TEAM ORIENTS THE MAP, PLOTS THE AZIMUTH TO THE FIRST OBJECT, GOES TO IT, FINDS WHAT IT IS AND TAKES PROOF OF HAVING FOUND IT. A 3 X 5 CARD . THE TEAM THEN PLOTS THE AZIMUTH FROM THE FIRST OBJECTIVE TO THE SECOND OBJECTIVE REPEATING THE FIRST PROCEDURE AND THEN RETURNING TO STARTING POINT.

139. MINUTE JUDGING. EVERYONE SITS ON THE FLOOR. THE LEADER LOOKS AT WATCH AND SAYS GO . THE CHILDREN TRY TO GUESS WHEN THE MINUTE IS OVER. REPEAT USING OTHER LENGTHS OF TIME.

140. WHERE AM I. SIT IN CIRCLE AROUND LEADER. LEADER TELLS HIS HIKING EXPERIENCE USING DISTANCES, DIRECTIONS AND FAMILIAR SIGNPOSTS. THE REST TRY TO GUESS THE DESTINATION.

141. I AM AT. TEACHER OUTLINES SERIES OF DEGREE READINGS AND DISTANCE ALREADY PLOTTED ON A MASTER MAP. CHILDREN PLOT COURSE ON THEIR MAPS AND TRY TO DETERMINE THE DESTINATION.

151. RING A BELL OR BLOW A WHISTLE AND HAVE THE CHILDREN FOLLOW THE SOUND WHILE BLINDFOLDED. THERE SHOULD BE NO TALKING.

155. TO MEASURE THE HEIGHT OF AN OBJECT. PENCIL METHOD. PUT A FRIEND WHOSE HEIGHT IS KNOWN AGAINST THE OBJECT. STEP BACK. HOLD A PENCIL OR SHORT STICK UPRIGHT IN YOUR OUTSTRETCHED HAND. MARK ON THE STICK THE HEIGHT OF THE BOY OR GIRL. FIGURE OUT HOW MANY TIMES THIS HEIGHT GOES UP THE HEIGHT OF THE OBJECT. MULTIPLY THE NUMBER OF TIMES BY THE HEIGHT OF THE BOY TO GET THE HEIGHT OF THE OBJECT.

164. GATHER DRY WOOD OFF THE GROUND OR LOW, DEAD BRANCHES OF TREES FOR THE WOOD PILE. THEN SORT THE WOOD INTO THREE TYPES TINDER, TINY STICKS TO START BURNING FROM THE FIRST FLAME OF THE MATCH OR SPARK FROM FLINT KINDLING, LONG NARROW STICKS, NO THINKER THAN THUMB, TO MAKE

FIRE LARGER , AND FUEL, THICK STICKS TO KEEP THE FIRE BURNING.

165. GATHER WOOD ACCORDING TO GIVEN SPECIFICATIONS. FOR EXAMPLE - 20 PIECES OF KINDLING, 10 OF TINDER, AND 5 OF FUEL.

179. MAKE A CLASS GUIDE OF CONSTELLATIONS. TAKE IT WITH THE CLASS WHEN CAMPING AND SEE HOW MANY YOU CAN FIND.

182. COMPASS CHANGE. CHILDREN FACE INWARD, EACH REPRESENTING A COMPASS POINT, EXCEPT THE IT WHO STANDS IN THE CENTER. IT CALLS OUT TWO COMPASS POINTS. THE CHILDREN REPRESENTING THE POINTS ATTEMPT TO CHANGE PLACES WHILE THE IT TRIES TO GET ONE OF THEIR PLACES. THE CHILD LEFT WITHOUT A PLACE IS IT .

183. GAME. SEND SOME STUDENTS AHEAD TO SIGNAL SIMPLE HIKE DIRECTIONS USING FLAGS OR WHISTLES.

184. MESSAGE RELAY. DIVIDE THE CLASS INTO EVEN GROUPS. CUT UP A MESSAGE INTO ONE WORD SLIPS. START THE RELAY RACE ON SIGNAL WITH EACH CHILD PICKING UP ONE SLIP AND RETURNING TO THE LINE. A LEADER TRIES TO ARRANGE THE MESSAGE. WHEN ITS DECIPHERED, THE FIRST GROUP TO ACCOMPLISH THE TASK WINS.

185. SILENT FUN. AFTER VARIOUS FLAG OR WHISTLE SIGNALS HAVE BEEN ESTABLISHED, GIVE SIGNALS AND SEE IF THEY ARE RECOGNIZED. VERBAL OR WRITTEN ANSWERS CAN BE USED.

216. THE ORDER OF BREAKING CAMP CAN FOLLOW THIS PLAN -
- CLEAN ALL KITCHEN GEAR AND PACK
- PACK ALL PERSONAL EQUIPMENT AND PLACE IN ONE AREA
- TAKE DOWN ALL KITCHEN ARRANGEMENTS, INCLUDING FIREPLACES, FILL IN
- GARBAGE AND GREASE PITS.
- CLEAN OUT WASHING PLACE, FILL IN LATRINE, AND CLEAN CAMPFIRE CIRCLE.
- TAKE DOWN ALL TENTS AND PACK THEM UP.
- CLEAN ALL TENT SITES, FILLING IN ALL DITCHES AND REPLACING SOD.
- CHECK YOUR LIST OF EQUIPMENT A D SUPPLIES TO MAKE SURE THAT EVERY-THING IS THERE.
- FORM A LINE AND MOVE ACROSS THE CAMPSIGHT PICKING UP ALL TRACES OF SCRAPS ON GROUND.

217. MAKE MAPS OF THE SCHOOL TO SCALE SHOWING HALLS, ROOMS, PARKING LOTS, PLAYAREAS, OFFICES, BATHROOMS, ETC..

225. MAKE A MAP OF THE ROOM SO A VISITOR COULD FIND WHAT HE NEEDED. INCLUDE DESKS, WINDOWS, DOORS, BOOK CASES, ETC. THE TEACHER SHOULD DETERMINE DETAIL.

226. YOU ARE LOOKING DOWN AT YOUR BEDROOM FROM THE CEILING. WHAT DO YOU SEE. DRAW A PICTURE FROM THAT PERSPECTIVE. THE TEACHER SHOULD DETERMINE DETAIL OF DRAWING.

243. SCAVENGER HUNT.
MAKE A LIST USING PICTURES OR WORDS OF PLANTS AND/OR ANIMALS THE CHILDREN ARE TO FIND. THE CHILDREN SHOULD BE ABLE TO DESCRIBE OR DRAW THE ANSWER BUT NOT COLLECT OR PICK IT.

246. WINTER GAME. DIVIDE GROUP INTO TWO TEAMS. HAVE ONE GROUP RUN AHEAD FOR FIFTEEN MINUTES THEN ALL HIDE TOGETHER. THE NEXT TEAM FOLLOWS THEM BY NOTING TRACKS IN SNOW, B OKEN STICKS, AND OTHER TRACES.

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DESIGNATE A MEETING PLACE, AND TIME IN CASE TEAMS CANNOT LOCATE EACH OTHER.

277. TAKE PICTURES AT A PARK OR PLACE YOU PLAN TO VISIT, IN VARYING LOCATIONS. WHEN THE CHILDREN GET THERE, HAVE THEM FIND THE LOCATIONS SEEN IN THE PICTURES.

295. HAVE THE STUDENTS ROPE OFF THE CLASSROOM INTO SIX EQUAL SECTIONS. AFTER DOING THAT HAVE THEM DRAW A MAP OF THE ROOM. TELL THEM TO DRAW TO SCALE EVERYTHING IN THE SPECIFIC AREA THAT THEY ARE ASSIGNED TO.

338. CONSULT A TOPOGRAPHICAL MAP OF A LOCAL AREA. HAVE CHILDREN FIND LANDFORMS SUCH AS WATERFALLS, STREAMS, HILLS, ETC. GO OUT AND SEE THE LANDFORMS. COMPARE THE MAP AND THE ACTUAL LANDSCAPE.

339. PHOTOGRAPH LOCAL LANDFORMS, SUCH AS HILLS, SWAMPS, VALLEYS, CLIFFS, STREAMS.

358. RECORD THE SOUNDS OF A STREAM. PLAY IT BACK AND DISCUSS WHAT THE STREAM LOOKED LIKE AT EACH SEGMENT OF THE RECORDING.

366. MAP READING. DRAW SYMBOLS FOUND ON TOPOGRAPHIC MAPS ON CARDS. PUT MEANINGS ON OTHER CARDS. MIX UP CARDS AND MATCH.

372. ORIENTEERING BY THE MOON. THE FULL MOON IS ALWAYS 180 DEGREES FROM THE SUN. WHEN THE MOON IS A CRESCENT, THE CONVEX SIDE IS TOWARD THE SUN. FIGURE OUT DIRECTIONS FROM THIS INFORMATION.

373. ORIENTEERING. FIND THE NORTH STAR IN THE NIGHT SKY. WHEN YOU FACE POLARIS, EAST IS ON YOUR RIGHT, WEST IS ON YOUR LEFT.

374. ORIENTEERING IN WINTER. GET A STICK ABOUT 4 FEET LONG AND JAB IT INTO THE SNOW. IMMEDIATELY MARK THE TIP OF THE SHADOW ON THE SNOW. WAIT ABOUT 10 MINUTES AND MARK AGAIN. A LINE DRAWN BETWEEN THE TWO POINTS IS AN APPROXIMATE EAST-WEST LINE.

375. ORIENTEERING. IF THE DIRECTION OF PREVAILING WING AMONG PEAKS IS KNOWN, YOU MAY TELL DIRECTIONS FROM THE RIME OF TREES. TREES IN EXPOSED LOCATIONS ON PEAKS IS USUALLY THICKER WITH RIME ACCUMULATION.

376. ORIENTEERING. TO OBTAIN APPROXIMATE POSITION SIGHT ALONG A STRAIGHT STICK PLACED ON AN ORIENTED MAP THROUGH A MOUNTAIN AND TOWARD THE CORRESPONDING DISTANT PEAK. DRAW A LINE ON THE MAP ALONG THE SIGHTED STICK. REPEAT PROCESS FOR SECOND MOUNTAIN. THE INTERSECTION MARKS THE APPROXIMATE LOCATION.

377. ORIENTEERING. TO DETERMINE SELF-LOCATION TAKE A MAGNETIC BEARING OF TWO PROMINENT FEATURES AT LEAST 90 DEGREES APART. ON YOU MAP DRAW BACK BEARING LINES. THE POINT OF INTERSECTION IS YOUR POSITION. AS A CHECK, TAKE A BEARING ON A THIRD FEATURE.

382. ORIENTEERING. SOME PLANTS GROW THEIR LEAVES IN A COMPASS DIRECTION E.G. THE WILD LETTUCE AND PILOT WEED. FIND SUCH PLANTS AND COMPARE TO A COMPASS READING.

397. ORIENTEERING. A CROSS SECTION OF A TREE USUALLY SHOWS A GROWTH IN THE RINGS AND BARK TOWARDS THE NORTH.

398. COMPASS GAME. HUNT THE PENNY . PUT A PENNY ON THE GROUND BY YOUR FEET. SET THE COMPASS AT 60 DEGREES AND TURN TO FACE THIS BEARING.

NOW WALK 10 PACES FORWARD. NEXT ADD 120 DEGREES TO YOUR PRESENT READING 180 DEGREES . TURN TO FACE THIS BEARING AND WALK 10 PACES FORWARD. AGAIN ADD 120 DEGREES MAKING 300 DEGREES FOR THE FINAL SIDE OF A TRIANGULAR COURSE AND WALK 10 PACES. IF YOU HAVE BEEN ACCURATE THE PENTY WILL BE AT YOUR FEET.

433. ON A HIKE, STOP THE GROUP AT AN APPROPRIATE, PRE-SELECTED AREA. ALLOW THE GROUP TO MOVE ABOUT FREELY, BUT CAREFULLY FOR TEN MINUTES IN THE AREA COLLECTING SPECIMENS OF PLANT LIFE. SPECIMENS CHOSEN SHOULD NOT BE PICKED FROM LIVING PLANTS NOR SHOULD THE ECOLOGY OF THE AREA BE HARMED IN ANY OTHER WAY. RETURN TO THE MEETING WITH 5-10 ITEMS FOUND AND RELATE TO THE GROUP A SPECIFIC STATEMENT ABOUT EACH ITEM. THE TEACHER SHOULD OBSERVE THE CHILDREN MOVING AND HUNTING WITH RESPECT TO SAFE POSITIVE BEHAVIOR IN THE WOODS AND INDEPENDENT WORK HABITS.

434. COMPASS RELAY. SELECT TEN MEMBERS AND STATION THEM AT CERTAIN POINTS ALONG THE COURSE, WITH THEIR LOCATIONS UNKNOWN TO OTHER TEAM MEMBERS. THE FIRST RUNNER HAS THE READING FOR THE ENTIRE TEAM. HE TAKES THE FIRST READING WHICH LEADS HIM TO THE SECOND RUNNER WHO TAKES THE NEXT READING AND RUNS TO A THIRD RUNNER, ETC. THE FIRST TEAM FINISHED, WINS. CONSTRUCT THE TWO COURSES ALONG DIFFERENT PATHS BUT TO BEGIN AND END AT THE SAME POINT FOR EASE IN JUDGING. COURSES SHOULD ALSO BE SIMILAR IN DIFFICULTY. A MAXIMUM TIME LIMIT SHOULD BE SET. TALKING BETWEEN TEAM MEMBERS IS NOT ALLOWED.

435. USE OF THE COMPASS. BEFORE STARTING ON THE TRAIL, STUDENTS MUST BE ABLE TO FOLLOW A SET OF DIRECTIONS USING THE COMPASS.
-HOLD THE COMPASS BY ITS BASE AND TURN THE METAL HOUSING UNTIL THE DESIRED DEGREE OR DIRECTION IS LINED UP WITH THE DIRECTION OF TRAVEL ARROW IN THE BASE.
-HOLD THE COMPASS LEVEL, WITH THE DIRECTION OF TRAVEL ARROW POINTING STRAIGHT AHEAD AWAY FROM YOU. TURN YOURSELF NOT THE COMPASS UNTIL THE RED-TIPPED COMPASS NEEDLE AND THE BLACK OUTLINED ARROW ARE POINTING THE SAME WAY.
-YOU ARE NOW FACING IN THE DIRECTION YOU WANT TO GO.
FROM A PREPARED LIST OF COMPASS READINGS AND FOLLOWING THE ABOVE INSTRUCTIONS, ALLOW EACH STUDENT TO PRACTICE FINDING THE DIRECTION OF TRAVEL. ALLOW STUDENTS TO CHECK FOR ACCURACY OF HIS PARTNER S PROCEDURES.

444. ON A CLEAR NIGHT, HAVE THE CHILDREN LIE DOWN ON THEIR BACKS AND GAZE AT THE STARS AND CONSTELLATIONS. AFTER DESCRIBING SOME OF THE CONSTELLATIONS AND IDENTIFYING SPECIFIC STARS, INVITE THE CHILDREN TO TAKE TURNS INVENTING NEW CONSTELLATIONS AND MAKING UP A FABLE, LEGEND, OR SHORT STORY ABOUT HOW IT CAME TO BE. THE TEACHER MAY WANT TO TELL SOME OF THE CONSTELLATION STORIES, GREEK AND ROMAN LEGENDS TO THE CHILDREN BEFOREHAND OR AT THE BEGINNING OF THE EXERCISE AT CAMP.

468. AT SCHOOL, MAKE A SUNDIAL BY PLACING A PAPER PLATE FACE DOWN ON THE GROUND WHERE THE SUN SHINES ALL DAY. PUSH A PENCIL OR PIECE OF DOWELING 10-15 INCHES LONG THROUGH THE CENTER OF THE PLATE AND INTO THE GROUND. BE CERTAIN THE DOWEL POINTS STRAIGHT UP. AT 9 A.M. CHECK TO SEE WHERE THE DOWEL S SHADOW FALLS ON THE EDGE OF THE PLATE. MARK THE SPOT WITH A SHORT LINE. CONTINUE MARKING EVERY HOUR THROUGH THE SCHOOL DAY. TELL TIME WITH IT BY TAKING IT OUTSIDE ON THE NEXT FEW SUNNY DAYS. YOU MAY ALSO WANT TO COMPARE THE FACE OF A SUNDIAL WITH THE FACE OF A CLOCK. EXPLAIN WHY SUNDIALS ARE POOR AS EXACT TIME PIECES.

469. MAKE A CAMP SUNDIAL BY PLACING A STICK STRAIGHT UP IN THE GROUND AT THE CENTER OF A CIRCLE WHOSE DIAMETER IS LESS THAN THE LENGTH OF THE STICK. MARK WITH A STONE THE SHADOW S INTERSECTION WITH THE CIRCUMFERENCE OF CIRCLE AT 9 A.M., 10 A.M. AND EVERY HOUR THROUGH THE DAY. LABEL THE TIME BY POINTING ON THE ROCKS. TELL TIME WITH THE SUNDIAL ON THE NEXT SUNNY DAY AT CAMP.

488. HUNTING GAME - CURIO COLLECTOR. THE LEADER GIVES A GROUP THE NAME OF SOMETHING TO BE FOUND, SUCH AS A STUMP OF A TREE MORE THAN 100 YEARS OLD OR A TREE STRUCK BY LIGHTNING. THE INDIVIDUALS SCATTER TO FIND THE OBJECT, THE FIRST PERSON FINDING IT CALLING THE REST OF THE GROUP TO SEE THE CURIOSITY . THE LEADER THEN NAMES THE NEXT OBJECT TO BE SEARCHED FOR. CAUTION - ALWAYS SET THE RULES AND BEHAVIORS OF STABLE LIMITS WITHIN WHICH THE GROUP MAY OPERATE. ALWAYS SELECT A SAFE HUNTING AREA.

495. HOW THE TREE IS BENT. IN A WALK IN THE NEIGHBORHOOD OR IN THE WOODS OBSERVE THE DIRECTION WHICH TREES HAVE BENT IN THEIR GROWTH OR SWAY WITH THE WIND. THE KNOWLEDGE OF THE PREVAILING WINDS IS A VITAL FACTOR IN THE IDENTIFICATION OF DIRECTIONS. IN A PREVAILING WESTERLY CLIMATIC REGION. THE TREES SHOULD BEND TOWARD AN EASTERLY DIRECTION. LATER, ON ANOTHER HIKE, FIND AN EXAMPLE OF A TREE OR CLUMP OF TREES WHICH WOULD DEMONSTRATE THIS BEND. ANOTHER TECHNIQUE - SUN S APPARENT RISING IN THE EAST, 90 DEGREE ANGLE OR OVERHEAD AT MID-DAY, AND SETTING IN THE WEST.

496. ON A WALK IN THE WOODS, MARK THE TRAIL FOR A SAFE RETURN AS A PRECAUTIONARY DEVICE. WHILE HIKING, OBSERVE OUTSTANDING FEATURES WHICH ARE UNIQUE OR INTERESTING AND MENTALLY RECORD THEM. ESTABLISH A PLAN OF TRAIL MARKINGS - BRANCHES ARRANGED AS A DIRECTION FINDER, AN ARRANGEMENT OF STONES, A NOTCH CUT ON AN A TREE TRUNK, ETC. WITH THE CHILDREN BEFORE STARTING OUT ON THE WALK. IF A MAP OF THE HIKING AREA IS AVAILABLE, POINT OUT AND DISCUSS WITH THE CHILDREN THE MAJOR FEATURES ALONG THE TRAIL BEFOREHAND.

512. TALKING DRUM. TEACHER EXPLAINS HOW DRUMS HAVE BEEN USED FOR COMMUNICATION OVER LONG DISTANCES BY PRIMITIVE PEOPLES SUCH AS AMERICAN INDIANS. THIS COMMUNICATION WAS BASED UPON CERTAIN CODES. THIS GAME DEPENDS ON A SIMPLE RHYTHM CODE. THE TEACHER BEATS THE DRUM TO THE RHYTHM OF A CHILD S NAME, FOR EXAMPLE, ROBERT JOHNSON DAH DA DAH DA . INITIALLY THE TEACHER SHOULD SAY THE NAME ALONG WITH THE DRUM BEATS, LATER SHE CAN MOUTH IT SILENTLY. THE CHILD RAISES HIS HAND WHEN HE HEARS THE RHYTHM OF HIS NAME. LATER, THE CHILDREN MAY BEAT OUT EACH OTHERS NAMES, USING MOTOR ACTIVITY TO REINFORCE THEIR AUDITORY PERCEPTION. CHILDREN MAY EVENTUALLY BE ABLE TO IMITATE DIFFICULT RHYTHMS.

529. PRESENT TO THE CHILDREN A SERIES OF PICTURES OR DIAGRAMS WHICH ILLUSTRATE GOOD AND POOR CAMPSITES. INCLUDE ROUGH OR ROCKY TERRAIN, LEVEL AND PROTECTED AREAS, HILLSIDES AND MOUNTAINS, UNPROTECTED WINDBLOWN AREAS AND RUNNING WATER SUPPLY. HAVE THE CHILDREN IDENTIFY THE GOOD CAMPSITES BY EXPLAINING THEIR REASONS FOR SELECTING THEM. CONTRAST THE POOR CAMPSITES WITH THE GOOD ONES BY EXPLAINING THE CLIMATIC AND GEOGRAPHIC PROBLEMS INVOLVED. MAKE A LIST OF GOOD CAMPSITE REQUIREMENTS.

530. READ JACK LONDON S SHORT STORY TO BUILD A FIRE TO THE CLASS. AFTER THE ENTIRE STORY HAS BEEN READ AND EXPLAINED AS AN ADVENTURE ABOUT A MAN FOOLISHLY ALONE IN THE ARCTIC, LIST ERRORS THE MAN MADE AS A TRAVELER WITH HIS DOG IN 90 DEGREE BELOW ZERO WEATHER. RE-READ

87

THE SECTION STRESSING THE MAN S ATTEMPT TO BUILD A FIRE AND CONTRAST HIS MISTAKES BY DESCRIBING PROPER METHODS FOR BUILDING A FIRE. MAKE A LIST OF PROPER FIRE BUILDING TECHNIQUES AS THEY PERTAIN TO SITE SELECTION, NEEDED BURNABLE MATERIALS, SAFETY FACTORS AND WEATHER CONDITIONS.

539. CHILDREN STUDY THE SCHOOL GROUND OR CAMP GROUND TO IDENTIFY A WIND SWEPT AREA IN NEED OF A WINDBREAK. PLAN AND PLANT A LIVING WINDBREAK OF PINE TREE SEEDLINGS. CHILDREN WILL BE RESPONSIBLE FOR FINDING OUT WHERE TO PURCHASE SEEDLINGS AND FOR CALCULATING THE COST.

560. AT SCHOOL, CONSTRUCT A WIND DIRECTIONAL POINTER, SUCH AS A WIND VANE OR A WIND SACK. MAKE A WIND VANE BY USING A WHEEL, AXLE OR OTHER MATERIALS FROM AN ERECTOR SET OR TINKER TOY SET OR ARRANGING A NEEDLE SET UP SO THAT A NARROW, TRIANGULAR SHAPED PIECE OF ALUMINUM OR HEAVY CARDBOARD CAN SPIN FREELY WITH THE WIND WHEN PLACED ON THE END OF A BROOMSTICK. PLACE A NORTH-SOUTH DIRECTION SIGN ON THE BROOMSTICK SO THAT EASY REFERENCE FOR WIND DIRECTION CAN BE MADE. CHILDREN SHOULD OBSERVE THE VANE MOVEMENTS AND DETERMINE THE PREVAILING WIND DIRECTION OVER A PERIOD OF 1-2 WEEKS. CHART OBSERVATIONS ON THE ROOM WEATHER CALENDAR. KNOWLEDGE OF PREVAILING WIND DIRECTION IS A USEFUL DIRECTION FINDER IN THE OUT-OF-DOORS.

MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943.
LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

4. BOOK. COLBY, C. B. FIRST CAMPING TRIP. COWARD-MC CANN, INC. NEW YORK, NY 1955.
RESOURCE BOOK. DRAWINGS WITH CAPTIONS. COVERS ALL SKILLS OF WILDERNESS CAMPING.

7. BOOK. LINDHOLM, LT. COLONEL MAUNO A. GUIDE FOR YOUNG CAMPERS. HART PUBLISHING CO. NEW YORK, N . 1961. $3.95.
A WELL ILLUSTRATED STEP BY STEP GUIDE TO CAMPING. INCLUDES CHECK LISTS FOR PLANNING OUTDOOR ACTIVITIES. COVERED IN BOOK IS - CLOTHES FOR CAMPING, SHELTERS, FOIL COOKERY, WIRE CRAFT, TREE IDENTIFICATION, SANITATION, TRAIL MARKS, BEDDING DOWN, AND WOODCRAFT.

68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201. CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
NEW YORK HAS AN EXCELLENT CONSERVATION DEPARTMENT. THEY CAN PROVIDE SPEAKERS, CAMPSITES, AND INFORMATION ON WHERE TO GO TO ACCOMPLISH A SPECIFIC OBJECTIVE. THEY WILL ALSO FURNISH AND WORK WITH YOU IN ENCOURAGING CONSERVATION PROJECTS.

72. BOOK. BAKER, ELIZABETH. TAMMY CAMPS IN THE ROCKY MOUNTAINS. HOUGHTON MIFFLIN CO. BOSTON. 5 PGS. $2.95.
TAMMY S INTEREST IN PHOTOGRAPHY GETS HER INTO A PREDICAMENT. CLIMBING AND CAMPING ADVENTURES ARE ESSENTIALS IN THE STORY.

78. BOOK. MACFARLAN. THE BOY S BOOK OF OUTDOOR DISCOVERY. STACKPOLE BOOKS. HARRISBURG, PA. 17105. $4.50.
ACTIVITIES FOR LEARNING CAMP SKILLS. CHAPTERS 1 - 6 AND 9 HELPFUL. SIMPLE EXERCISES IN ORIENTATION, AND NATURE STUDIES WHICH CHILDREN CAN DO INDEPENDENTLY.

86. BOOK. MACFARLAN, ALLEN A. THE BOY S BOOK OF BACKYARD CAMPING. STACKPOLE BOOKS. HARRISBURG, PA. 17105. 1968. $4.50.
THIS IS A THOROUGH, WELL-ORGANIZED RESOURCE BOOK FOR YOUNG BOYS AND TEACHERS. A WHOLE RANGE OF IDEAS ARE INCLUDED. COMPARING TENTS, FOOD PREPARATION, TAKING CARE OF EQUIPMENT, BASIC CAMPING SKILLS, GAMES, AND SAFETY RULES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
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91. BOOK. HAMMETT, CATHERINE T. YOUR OWN BOOK OF CAMPCRAFT. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. 1950. ABOUT $2.00.
A VERY GOOD GUIDE FOR YOUNG CAMPERS. STIMULATES INTERESTS. WELL WRITTEN. COVERS ALL PHASES OF CAMPING, INCLUDING CAMPING MANNERS.

92. BOOK. HOLDEN, JOHN L. THE YOUNG SPORTSMAN S GUIDE TO CAMPING. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. $1.00.
COVERS ALL FACETS OF CAMPING EXPERIENCE. GEARED TO YOUNG CAMPER. BASIC SKILLS FOR A GOOD CAMPING EXPERIENCE.

97. RESOURCE PERSON. JOHN E. CARTER, SR. HONEOYE FALLS, NY 14472. SCOUTMASTER FOR 15 YEARS, HAS BEEN HIKING AND BACKPACKING FOR YEARS WITH BOYS FROM 11 YRS TO 16 YRS. KNOWS ALL THE SCOUTING CAMPING TRICKS, AND HAS A GOOD RELATIONSHIP WITH BOYS. PHONE - 716/624-2321.

104. RESOURCE. NEW YORK STATE OUTDOOR EDUCATION ASSOCIATION, BOX 42, ALBANY, NY. 12201.
ALL KINDS OF INFORMATION ON OUTDOOR EDUCATION - OBJECTIVES, ACTIVITIES, MATERIALS.

106. RESOURCE. NEW YORK STATE EDUCATION DEPT. ALBANY, NY 12224.
THIS DIVISION CAN PROVIDE MATERIALS USEFUL IN PLANNING ACTIVITIES IN THE OUT-OF-DOORS.

111. BOOK. RIVIERE, WILLIAM. THE CAMPER S BIBLE. DOUBLEDAY AND CO. NEW YORK, NY 1970. $1.95.
THIS IS A VERY COMPREHANSIVE GUIDE, INCLUDING THE FOLLOWING TOPICS - TENTS AND HOW TO BUY THEM, CHOOSING A CAMPSITE, THE CAMPFIRE, COOKING STOVES, SLEEPING GEAR, PACKS AND PACKING, CLOTHES, USE OF MAP AND COMPASS, SAFETY, CANOES, AND WEATHER. IT ALSO LISTS PLACES TO WRITE FOR CAMPING INFORMATION.

112. BOOK. MACFARLAN, ALLAN A. THE BOY S BOOK OF HIKING. STACKPOLE BOOKS, HARRISBURG, PA 17105. $4.50.
A GOOD BOOK OF CAMPING BASICS - COOKING, DRESS, SAFETY, HEALTH, COMPASS WORK.

113. BOOK. BALE, R. O. WHAT ON EARTH. AMERICAN CAMPING ASSOCIATION, MARTINVILLE, INDIANA 46151. $3.95.
BACKGROUND KNOWLEDGE OF EARTH RESOURCES. FOSSILS, HISTORY, FIRE MAKING, MAP MAKING, COMPASS READING, FISHING, WEATHER, PLANTS, STREAM EXPLORATION. VERY GOOD FOR NATURE STUDY.

114. BOOK. MANDOLF, HENRY I. BASIC MOUNTAINEERING. 1050 MILLS TOWER 220 BUSH ST., SAN FRANSISCO, CALIF. 94104. $3.95.
BASIC SKILLS IN HIKING AND MOUNTAINEERING. EQUIPMENT, ALPINE

CAMPING AND COOKING, ORIENTATION, WEATER, CLIMBING MISERIES AND FIRST AID, MOUNTAIN TRAVEL, ROCK CLIMBING, WINTER TRAVEL AND SNOW CLIMBING. GLACIER TRAVEL, DESERT TRAVEL, RESCUE, AND RECOMMENDED LITERTURE.

115. BOOK. KEPHART, HORACE. CAMPING AND WOODCRAFT. THE MACMILLAN CO. RIVERSIDE, NY 08075. $6.95.
HAS MUCH PRACTICAL NATURE LORE. HAS INFORMATION WHICH IS AVAILABLE IN FEW OTHER PLACES. FIRST PRINTING - 1916. ALSO NOSTALGIC.

116. RESOURCE. AMERICAN CAMPING ASSOCIATION. MARTINSVILLE, INDIANA 46151
INFORMATION ABOUT CAMPING AND OUTDOOR ACTIVITIES - MAPS, CHARTS, EQUIPMENT, ACTIVITIES FOR OUT-OF-DOORS.

117. RESOURCE. AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION. COLLEGE OF EDUCATION, MICHIGAN STATE UNIVERSITY, EAST LANCING MICHIGAN 48823.
ALL SORTS OF INFORMATION - BOOKS, FILMS, RECORDS, ACTIVITIES DEALING WITH OUTDOOR EDUCATION.

123. BOOK. MCNALLY, TOM. CAMPING FOR BOYS AND GIRLS. FOLLETT PUBLISHING CO. CHICAGO, ILL. 1966.
A GOOD BOOK THAT DISCUSSES ALL ASPECTS OF CAMPING FROM EQUIPMENT TO SAFETY AND COURTESY. A SECTION S DEVOTED TO WHERE AND HOW TO SET UP CAMP, CAMP COOKING AND CARE OF EQUIPMENT.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
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140. FILM. MY MAP AND COMPASS. NTERNATIONA FILM BUREAU INC. 1961. SOUND/COLOR/BLACK AND WHITE/16 MM/27 MINUTES. $125.00.
A BOY AND HIS FATHER EXPLORE THE WOODS. THE BOY ON THEIR EXPLORATION LEARNS ABOUT AND USES MAPS AND A COMPASS.

151. FILM. MAPS ARE FUN. CORONET FILMS. 1963. SOUND/COLOR/BLACK AND WHITE/16 MM/11 MINUTES. COLOR - $130.00. BLACK AND WHITE - $65.00.
A BOY LEARNS ABOUT MAPS FROM A CARTOGRAPHER. TOGETHER THEY DRAW A MAP AND DEFINE TERMS.

165. BOOK. COLBY, C. B. SURVIVAL - TRAINING IN OUR ARMED FORCES. COWARD-MCCANN INC. 1965. $2.52.
MANY PICTURES. EXPLAINATION OF ARMY SURVIVAL TRAINING. EMPHASIZES BASIC NEEDS, AND PRIORITIES OF SURVIVAL.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

EASURING DEVICES

21. USING A COMPASS, SITE AN OBJECT IN THE N, S, E, W, AND MARK THE OBJECT ON A MAP. MARK YOUR LOCATION WITH AN X .

35. USING A COMPASS, PLOT A COURSE ON A TOPOGRAPHICAL MAP AND FOLLOW IT. ON A CHECK LIST, MARK OFF THE IDENTIFYING FACTORS OF THE TRAIL WHEN SEEN.

51. GIVEN A SERIES OF COMPASS READINGS, THE STUDENTS SHOULD BE ABLE TO FIND A DEFINED POSITION.

91

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - FLORENCE W.

OBJ. 9

9. TO SET UP SHELTER ACCORDING TO CLIMATIC AND GEOGRAPHIC CONDITIONS.

INDIVIDUAL ACTIVITIES

88. INVESTIGATE WINTER ENVIRONMENTS. INCLUDE -
- AIR TEMPERATURE
- SOIL TEMPERATURE
- SURFACE TEMPERATURE
- WIND DIRECTION
- WIND VELOCITY
- HUMIDITY
- LIGHT INTENSITY
RELATE YOUR FINDINGS TO OUTDOOR LIVING.

197. BUILD TOWERS AND HOUSES USING SMALL STICKS. MAKE A MODEL OF AN OUTDOOR SHELTER.

297. IN THE WINTER FOR SNOW CAMPING A WINDBREAK MAY BE BUILT FROM SNOW EITHER DUG OUT DEEP ENOUGHT FOR A TENT TO BE PLACED DOWN IN IT OR ELSE A SINGLE WALL MAY BE BUILT.

298. GATHER BRANCHES FROM A SURROUNDING AREA. FORM A TEPEE SHELL THEN CONTINUALLY PILE ON ADDITIONAL LEAVES AND BRANCHES. DO NOT CUT DOWN LIVE TREES UNLESS NECESSARY.

299. USE A PLASTIC SHEET 9 FEET BY 12 FEET FOR 3 - 4 PEOPLE. THIS PROVIDES ADEQUATE SHELTER IN WARM WEATHER. USE ALPINE CORD AND STRING UP BETWEEN TREES. PLACE PLASTIC OVER IT TO MAKE A LEAN-TO OR TENT LIKE STRUCTURE. USE ACORNS, PINE CONES, A SMALL ROCKS TO TIE OFF THE ENDS.

300. TENTS SHOULD BE PLACED IN THE LEAST EXPOSED AREA. THE AREA TO BE USED AS A FLOOR SHOULD BE CHECK FOR HIDDEN ROCKS OR OTHER CUMBERSOME OBJECT.

315. MAKE A SHOWER. NEEDED - ONE NO. 10 CAN, A PAIL WITH HANDLE, ROPE, TWO 9 FOOT POLES.
- CUT TOP EDGE OF NO. 10 CAN TO FIT THE CURVE OF PAIL.
- PUNCH SMALL HOLES IN BOTTOM OF CAN WITH NAIL
- FASTEN THE EDGE OF PAIL WITH WIRE
- BEND HANDLE OF PAIL TO FIT CROSS PIECE OF SHEAR LEGS
- ATTACH A STICK WITH ROPE ACROSS PAIL
- ADD CROSS PIECE TO SHEAR LEGS WITH SQUARE LASHING
- ATTACH A LONG ANCHOR ROPE TO TOP.
- PICK A SECLUDED SPOT. SHIELDED FROM STRONG WINDS
- WARM WATER IN SUN, OR OVER FIRE.
- ATTACH PAIL IN POSITION. RAISE STRUCTURE
- PULL ROPE FOR SHOWER. REFILL WHEN NECESSARY
- ESTABLISH RULES FOR SHOWERING BY GROUP DISCUSSION.

383. MATTING AND BEDDING. DRY GRASS, PINE BOUGHS, JUNIPER BARK, CATTAIL STALKS, MAKE EXCELLENT BEDDING.

384. FOR A LENGTHIER SHELTER DRIVE 2 PARALLEL ROWS OF STAKES IN THE GROUND ABOUT A FOOT APART. LEAN WILLOW STICKS ALONG THE STAKES TO FORM A FAIRLY TIGHT MESH, THEN STUFF GRASS BETWEEN THE TWO WOVEN WALLS. THE RESULT IS A THICK INSULATED WALL THAT WILL STOP ANY COLD. THE ROOF IS

SIMPLY MADE OF POLES AND WILLOWS WITH GRASS THATCHING PILED ON TOP. HEAVY WILLOW RODS AND BRUSH PILED ON TOP OF THE GRASS WILL KEEP THE WIND FROM BLOWING IT AWAY.

386. CONSTRUCT THE SHELTER STRONG ENOUGH TO WITHSTAND HIGH WINDS AND HEAVY SNOWFALLS.
- USE STRONG SUPPORTING POLE AND LASH THEM FIRMLY MOST OTHER POLES AND THATCHING CAN BE LAID ON WITHOUT LASHING .
- WHEN USING GRASS AND BOUGHS FOR THATCHING, ALWAYS STACK HEAVY BRANCHES AGAINST THE LODGE TO PREVENT THE WIND FROM SCATTERING IT.

387. USE PLENTY OF MATTING AND GRASS FOR A FLOOR COVERING.
- KEEP IT CLEARED AT LEAST ONE FOOT AWAY FROM AROUND THE FIRE.
- STIR IT UP EACH EVENING.

INDIVIDUAL MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943. LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

48. REALIA. PLASTIC GROUND SHEET. AVAILABLE THROUGH HARDWARE STORES OR SPORTING GOODS STORES. APPROXIMATE PRICE - $1.00 PER 3 FT. X 6 FT. A PLASTIC SHEET IS NECESSARY IN ORDER TO KEEP DRY. IT IS PLACED UNDER THE SLEEPING BAG TO RETARD THE BAG FROM DRAWING MOISTURE FROM THE GROUND.

52. REALIA. TENT. CONTACT MFG. FOR DISCOUNT PRICE OR AVAILABLE THROUGH SPORTING GOODS STORE. APPROXIMATE PRICE - $12.00 AND UP. A TENT IS ONLY ESSENTIAL IN COLD WEATHER. HOWEVER, IF SLEEPING BAGS ARE POOR THEN A TENT MAY BE NEEDED TO RETAIN HEAT. A NYLON TENT IS EASIEST TO CLEAN AND IT ALSO PROVIDES THE BEST WIND-BREAK.

56. REALIA. SLEEPING BAGS. GOOSE AND DUCK DOWN AVAILABLE AT SPORTING GOODS STORES OR CONTACT THE MFG. FOR A LARGE PURCHASE. GERRY, WOODS, HOLUBAR, ALPINE - ARE THE BEST. PRICE VARIES UPON THE TYPE OF INNER CONSTRUCTION AND DOWN WEIGHT. $30.00 TO $150.00.
GOOSE DOWN IS THE BEST MATERIAL AVAILABLE WITH DUCK A CLOSE SECOND THIS MATERIAL IS LIGHT, WARM, AND CAN BE COMPRESSED INTO A SMALL AREA. HOWEVER, IT IS THE MOST EXPENSIVE YET ALMOST A NECESSITY IF ANY SERIOUS BACKPACKING IS TO BE UNDERTAKEN.

57. REALIA. SLEEPING BAG. DACRON #88. - DUPONT . AVAILABLE THROUGH FACTORY STORES FOR A LARGE SCALE PURCHASE OR AT A SPORTING GOODS STORE. APPROXIMATE PRICE - $20.00 TO $30.00.
THESE BAGS ARE ALMOST AS EFFICIENT AS DOWN BUT MUCH CHEAPER. THEY DO NOT ROLL UP AS COMPACT AS A DOWN BAG. IF COST IS A CONCERN THEY ARE A VERY ADEQUATE BAG. MUCH BETTER THAN THE POLYESTER BAGS.

58. REALIA. SLEEPING BAG. FOAM CHECK THE FACTORY MFG. FOR A DISCOUNT IF BUYING IN QUANTITIES. APPROXIMATE PRICE $40.00 TO $50.00. PRICE SHOULD DECREASE AS THESE BAGS BECOME MORE POPULAR.
THIS TYPE OF BAG HAS BEEN RECENT Y INTRODUCED. SUPPOSEDLY IT IS AS WARM AS A DOWN BAG YET CHEAPER. HOWEVER, IT DOES NOT FOLD UP INTO A COMPACT AN AREA AS DOWN.

59. REALIA. SLEEPING BAG. POLYESTER THESE ARE THE CHEAPEST AND LEAST EFFECIENT BAGS. APPROXIMATE PRICE - $8.00 TO $20.00.

MAN MADE MATERIAL ARE NOT THE BEST TYPES AS THEY HAVE A TENDENCY TO COMPRESS AND THUS LOSE THEIR ABILITY TO INSULATE. THEY ARE ALSO THE MOST BULKY TYPE TO CARRY.

68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201. CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
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71. REALIA. ENSOLITE PADS. AVAILABLE THRCUGH SPORTING GOODS STORES. APPROXIMATE PRICE - $5.00.
THESE PADS ARE NECESSARY WHEN SLEEPING ON THE GROUND. MUCH OF THE BODY S HEAT IS LOST THROUGH CONVECTION AND THESE PADS INHIBIT THAT LOSS.

75. BOOK. JAEGER, ELLSWORTH. WILDWCOD WISDOM. MACMILLEN CO. $6.95
THIS BOOK IN SOME CIRCLES IS CONSIDERED A STANDARD FOR CAMPERS. IT DOES PROVIDE A WEALTH OF INFORMATION AND CAN PROVIDE ON THE SPOT REFERENCES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
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131. BOOK. WHELEN, COLONEL TOWNSEND AND ANGIER, BRADFORD. ON YOUR OWN IN THE WILDERNESS. STACKPOLE CO. HARRISBURG, PA 17105. 1958.
A GOOD CAMPING AND WOODCRAFT HANDBOOK COVERING WILDERNESS CAMPING. SECTIONS CONCERNING SHELTERS, EQUIPMENT, MAP READING, AND COOKING.

134. ARTICLE. CAMPING JOURNAL. YOU BUILD IT BACKPACK TENT. SCIENCE AND MECHANICS PUBLISHING CO. NEW YORK, NY 10003.
ILLUSTRATES HOW TO MAKE AN INEXPENSIVE LIGHT-WEIGHT 2 MAN TENT. STEP BY STEP DIRECTIONS ARE GIVEN AS WELL AS A LIST OF NEEDED EQUIPMENT AND DIAGRAMS OF THE TENT.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
THIS IS AN EXCELLENT BOOK COVERING EVERY ASPECT OF A CAMPING EXPERIENCE. ANGIER DISCUSSES CLOTHING, BACKPACKING, FORECASTING THE WEATHER FROM NATURE, FIRES, SHELTERS, WAYS TO TRAVEL AND GATHERING AND PREPARING FOOD. USEFUL AS COMPLETE GUIDE.

176. RESOURCE PERSON. DONALDSON, GEORGE. HOW TO PLAN AND CONDUCT FIELD TRIPS. BOX 203. OREGON, ILLINOIS.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

INDIVIDUAL MEASURING DEVICES

95

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - FLORENCE W.

BEST COPY AVAILABLE

OBJ. 12

12. TO DEMONSTRATE UNDERSTANDING OF ROPE WORK.

INDIVIDUAL ACTIVITIES

188. KNOT TYING. DIVIDE CLASS INTO TWO GROUPS. HAVE 4 FEET LENGTHS OF ROPE FOR EACH CHILD. ON COMMAND HAVE THE STUDENTS TIE FOLLOWING KNOTS IN THIS ORDER -
- SQUARE KNOT
- SHEET BEND
- FISHERMAN S KNOT
- CLOVE HITCH
- TWO HALF HITCHES
- TIMBER HITCH
- TAUT LINE HITCH
- BOWLINE

315. MAKE A SHOWER. NEEDED - ONE NO. 10 CAN, A PAIL WITH HANDLE, ROPE, TWO 9 FOOT POLES.
- CUT TOP EDGE OF NO. 10 CAN TO FIT THE CURVE OF PAIL.
- PUNCH SMALL HOLES IN BOTTOM OF CAN WITH NAIL
- FASTEN THE EDGE OF PAIL WITH WIRE
- BEND HANDLE OF PAIL TO FIT CROSS PIECE OF SHEAR LEGS
- ATTACH A STICK WITH ROPE ACROSS PAIL
- ADD CROSS PIECE TO SHEAR LEGS WITH SQUARE LASHING
- ATTACH A LONG ANCHOR ROPE TO TOP.
- PICK A SECLUDED SPOT. SHIELDED FROM STRONG WINDS
- WARM WATER IN SUN, OR OVER FIRE.
- ATTACH PAIL IN POSITION. RAISE STRUCTURE
- PULL ROPE FOR SHOWER. REFILL WHEN NECESSARY
- ESTABLISH RULES FOR SHOWERING BY GROUP DISCUSSION.

332. USE MILKWEED, INNER BARK OF ELM, HICKORY, OR BASSED TO TWIST 10 FEET OR MORE OF FISHLINE. TO MAKE LINE, HOLD 2 PIECES OF FIBER OF UNEQUAL LENGTHS TOGETHER AND TIE AN OVERHAND KNOT IN ONE END. LOOP THE KNOT OVER A PEG AND HOLD ONE PIECE IN EACH HAND BETWEEN THUMB AND FORE-FINGER. MAKE A SAFETY PIN HOOK, THEN HOCK, OR TOGGLE AND TIE TO THE LINE.

334. HAVE THE STUDENTS WORK WITH MACROME TO BETTER MANIPULATE ROPE.

335. HAVE THE STUDENTS EXPLAIN HOW KNOTS WORK. HAVE THEM IDENTIFY THE STRESS POINTS OF A KNOT.

364. DEMONSTRATE DIFFERENT METHODS OF COILING A ROPE. COIL AROUND THE KNEES AND FEET, COIL FROM THE HAND TO THE ELBOW.

384. FOR A LENGTHIER SHELTER DRIVE 2 PARALLEL ROWS OF STAKES IN THE GROUND ABOUT A FOOT APART. LEAN WILLOW STICKS ALONG THE STAKES TO FORM A FAIRLY TIGHT MESH, THEN STUFF GRASS BETWEEN THE TWO WOVEN WALLS. THE RESULT IS A THICK INSULATED WALL THAT WILL STOP ANY COLD. THE ROOF IS SIMPLY MADE OF POLES AND WILLOWS WITH GRASS THATCHING PILED ON TOP. HEAVY WILLOW RODS AND BRUSH PILED ON TOP OF THE GRASS WILL KEEP THE WIND FROM BLOWING IT AWAY.

401. ATTACH THE POINT WITH SINEW ANIMAL TENDON . TRY TO SAND THE EDGES TO MAKE SURE THEY ARE SMOOTH AND WILL FIT INTO THE NOTCH. IF POSSIBLE

ALSO GLUE WITH PITCH. WHEN THE SINEW IS DRY THE ARROW IS READY FOR USE.

403. USE SINEW IF AVAILABLE TO MAKE THE BOWSTRING, NETTLE, MILKWEED AND SOME BARK ARE ALSO GOOD. CUT THE STRING AT LEAST 12 INCHES LONGER THAN THE BOW. USE TWO PIECES OF CORD AND TWIST THEM TOGETHER FOR ADDED STRENGTH. FINALLY RUB SALIVA OR WATER OVER THE STRING TO SMOOTH IT DOWN. LET DRY IN THIS POSITION.

407. ATTACH HOOKS BY A TIGHT WRAPPING OF FINE STRING OR FIBER. FIRST SMEAR THE HOOK WITH PITCH THAN WRAP WITH FIBER AND SEAL AGAIN.

408. ANOTHER HOOK CAN BE MADE BY CUTTING A BONE INTO A RECTANGLE. NEXT DRILL THE BONE SEVERAL TIMES TO REMOVE THE CENTER PORTION. USE A STONE TO SMOOTH THE INSIDE OUT. THIS SHOULD LEAVE A RECTANGULAR PERIMETER OF BONE. FINALLY CUT THE RING IN TWO OPPOSITE DIAGONAL PLACES. THIS CREATING TWO BONES.

409. FISHING HOOKS ARE BEST MADE FROM BONE. A SKEWER BONE IS A SLIVER TIED IN THE MIDDLE AND IS TWINED PARALLEL TO THE LINE AND INSERTED INTO THE BAIT. AFTER THE BAIT IS SWALLOWED THE BONE TURNS SIDEWAYS AND THE FISH IS HOOKED.

410. MAKING FISH TACKLE BY USING BIRD BONES AND MAKE TWINE FROM STRINGING NETTLE, MILKWEED, AND DOGBONE. TWIST THE FIBERS TOGETHER FOR ABOUT TEN FEET AND THEN TIE TO A POLE.

411. MAKING CORDAGE -
- HOLD TWO PIECES OF FIBER IN THE LEFT HAND BETWEEN THE THUMB AND FOREFINGER.
- TWIST THE FIBERS CLOCKWISE.
- WHEN THE FIBER ENDS ARE REACHED OTHER LENGTHS CAN BE ADDED OR TIED TO THE ENDS.

INDIVIDUAL MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943. LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

28. REALIA. ALPINE CORD. AVAILABLE THROUGH HARDWARE STORE OR SPORTING GOODS STORE. APPROXIMATELY $1.00 PER 50 FT. THIS CORD IS GOOD FOR LASHING AND SETTING UP TARPS. IT S STRONG, LIGHTWEIGHT AND IT IS NOT AFFECTED BY THE ELEMENTS.

55. REALIA. ROPE. GOLD LINE AVAILABLE THROUGH SPORTING GOODS STORE. APPROXIMATE PRICE - 1/4 INCH - 8 PER FT., 1/16 INCH - 20 PER FT. 1/4 INCH IS NECESSARY FOR MAKING SLINGS. 1/16 INCH IS NECESSARY FOR CLIMBING, REPELLING.
NYLON ROPE IS MUCH BETTER FOR CLIMBING SINCE IT HAS GREATER RESILIANCY. HOWEVER, CAUTION SHOULD BE USED WHENEVER FRICTION IS A FACTOR. NYLON WILL BURN.

68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201. CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
NEW YORK HAS AN EXCELLENT CONSERVATION DEPARTMENT. THEY CAN PROVIDE SPEAKERS, CAMPSITES, AND INFORMATION ON WHERE TO GO TO ACCOMPLISH A SPECIFIC OBJECTIVE. THEY WILL ALSO FURNISH AND WORK WITH YOU IN

ENCOURAGING CONSERVATION PROJECTS.

75. BOOK. JAEGER, ELLSWORTH. WILDWOOD WISDOM. MACMILLEN CO. $6.95
THIS BOOK IN SOME CIRCLES IS CONSIDERED A STANDARD FOR CAMPERS. IT DOES PROVIDE A WEALTH OF INFORMATION AND CAN PROVIDE ON THE SPOT REFERENCES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
LARRY IS A SURVIVAL INSTRUCTOR OF THE HIGHEST ORDER. HE HAS A GREAT DEAL OF EXPERIENCE IN THE OUTDOORS. HE ACCEPTS NATURE FOR WHAT IT IS, AND WORKS WITH IT, NOT AGAINST IT.

104. RESOURCE. NEW YORK STATE OUTDOOR EDUCATION ASSOCIATION, BOX 42, ALBANY, NY. 12201.
ALL KINDS OF INFORMATION ON OUTDOOR EDUCATION - OBJECTIVES, ACTIVITIES, MATERIALS.

106. RESOURCE. NEW YORK STATE EDUCATION DEPT. ALBANY, NY 12224.
THIS DIVISION CAN PROVIDE MATERIALS USEFUL IN PLANNING ACTIVITIES IN THE OUT-OF-DOORS.

111. BOOK. RIVIERE, WILLIAM. THE CAMPER S BIBLE. DOUBLEDAY AND CO. NEW YORK, NY 1970. $1.95.
THIS IS A VERY COMPREHANSIVE GUIDE, INCLUDING THE FOLLOWING TOPICS - TENTS AND HOW TO BUY THEM, CHOOSING A CAMPSITE, THE CAMPFIRE, COCKING STOVES, SLEEPING GEAR, PACKS AND PACKING, CLOTHES, USE OF MAP AND COMPASS, SAFETY, CANOES, AND WEATHER. IT ALSO LISTS PLACES TO WRITE FOR CAMPING INFORMATION.

114. BOOK. MANDOLF, HENRY I. BASIC MOUNTAINEERING. 1050 MILLS TOWER 220 BUSH ST., SAN FRANSISCO, CALIF. 94104. $3.95.
BASIC SKILLS IN HIKING AND MOUNTAINEERING. EQUIPMENT, ALPINE CAMPING AND COOKING, ORIENTATION, WEATER, CLIMBING MISERIES AND FIRST AID, MOUNTAIN TRAVEL, ROCK CLIMBING, WINTER TRAVEL AND SNOW CLIMBING. GLACIER TRAVEL, DESERT TRAVEL, RESCUE, AND RECOMMENDED LITERTURE.

115. BOOK. KEPHART, HORACE. CAMPING AND WOODCRAFT. THE MACMILLAN CO. RIVERSIDE, NY 08075. $6.95.
HAS MUCH PRACTICAL NATURE LORE. HAS INFORMATION WHICH IS AVAILABLE IN FEW OTHER PLACES. FIRST PRINTING - 1916. ALSO NOSTALGIC.

123. BOOK. MCNALLY, TOM. CAMPING FOR BOYS AND GIRLS. FOLLETT PUBLISHING CO. CHICAGO, ILL. 1966.
A GOOD BOOK THAT DISCUSSES ALL ASPECTS OF CAMPING FROM EQUIPMENT TO SAFETY AND COURTESY. A SECTION IS DEVOTED TO WHERE AND HOW TO SET UP CAMP, CAMP COOKING AND CARE OF EQUIPMENT.

131. BOOK. WHELEN, COLONEL TOWNSEND AND ANGIER, BRADFORD. ON YOUR OWN IN THE WILDERNESS. STACKPOLE CO. HARRISBURG, PA 17105. 1958.
A GOOD CAMPING AND WOODCRAFT HANDBOOK COVERING WILDERNESS CAMPING. SECTIONS CONCERNING SHELTERS, EQUIPMENT, MAP READING, AND COOKING.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
THIS IS AN EXCELLENT BOOK COVERING EVERY ASPECT OF A CAMPING EXPERIENCE. ANGIER DISCUSSES CLOTHING, BACKPACKING, FORECASTING THE WEATHER FROM NATURE, FIRES, SHELTERS, WAYS TO TRAVEL AND GATHERING

AND PREPARING FOOD. USEFUL AS COMPLETE GUIDE.

176. RESOURCE PERSON. DONALDSON, GEORGE. HOW TO PLAN AND CONDUCT FIELD TRIPS. BOX 203. OREGON, ILLINOIS.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

INDIVIDUAL MEASURING DEVICES

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - ROSE MARY L.

OBJ. 33

33. TO CONSTRUCT CRAFT ITEMS FROM MATERIALS FOUND IN THE OUT-OF-DOORS.

INDIVIDUAL ACTIVITIES

130. LEAF DESIGNS. BLEACH COLORED PAPER TO SHOW LEAF DESIGNS BY PLACING IN THE SUN WITH THE LEAVES ON IT. EXPOSURE SEVERAL HOURS WILL LIGHTEN THE PAPER AND AFTER REMOVING THE LEAF, THE ONCE COVERED AREA WILL REMAIN DARKER.

132. SNOW SCULPTURING. SEVERAL CHILDREN WORK TOGETHER IN COLLECTING SNOW AND CREATING THEIR OBJECT. AN ANIMAL, PERSON, CARTOON, CHARACTER, ETC., MAKE INTERESTING SCULPTURES. FOOD COLORING CAN BE USED TO COLOR FEATURES OF THE CHARACTER.

197. BUILD TOWERS AND HOUSES USING SMALL STICKS. MAKE A MODEL OF AN OUT-DOOR SHELTER.

201. SOIL PAINTING. MATERIALS - SOIL AND SAND, PLASTIC BAGS, WATER SOLUABLE WHITE GLUE, PAINT BRUSHES ONE AND TWO INCH SIZE , WOOD OR CARDBOARD.
- SPREAD OUT A VARIETY OF COLORS OF SOIL SAMPLES COLLECTED IN PLASTIC BAGS AND PLAN YOUR PAINTING.
- FILL A CONTAINER HALF FULL OF WHITE GLUE AND HALF FULL OF WATER.
- STROKE GLUE SOLUTION ON SELECTED AREAS OF WOOD OR CARDBOARD.
- SPRINKLE SOIL ON THE GLUE.
- LET SOIL DRY ON GLUE.
- LET PICTURE STAND ON A SIDE TO ALLOW LOOSE PARTICLES TO FALL. REPAIR.
- SPRAY FINISHED PAINTING WITH LACQUER AND FRAME.

FOR A HEAVY RAISED AREA MIX SOIL WITH PLASTER OF PARIS AND APPLY IMMEDIATELY.

202. NATURE PHOTOGRAPHY. USING A SIMPLE CAMERA, PHOTOGRAPH NATURAL OBJECTS WHICH ARE INTERESTING OR APPEALING. EXAMPLES - A COLORFUL INSECT, A BEAUTIFUL TREE, A BIRDS NEST, AN UNUSUALLY SHAPED ROCK, OR AN UNFAMILIAR FLOWER.

208. SUCCESSFUL AQUARIUMS. AN ADEQUATE AMOUNT OF WATER SHOULD BE PROVIDED. ABOUT A GALLON FOR EVERY INCH OF FISH IN THE TANK. WATER TEMPERATURE MUST BE KEPT CONSTANT. DO NOT PROVIDE A SUDDEN CHANGE WHEN ADDING FRESH WATER. PROPER AMOUNT OF FOOD IS ESSENTIAL. OVERFEEDING IS A MORE COMMON PROBLEM THAN UNDERFEEDING. PLANTS, WHILE NOT ESSENTIAL, ARE ATTRACTIVE AND DO PROVIDE A SHELTERED PLACE TO LAY EGGS.

209. LEAF COLLECTIONS. COLLECT LEAVES IN LATE SUMMER AND EARLY FALL TO PRESERVE THEM, PLACE EACH LEAF BETWEEN SHEETS OF NEWSPAPER, WITH SEVERAL SHEETS ABOVE AND MORE BELOW, AND WITH A HEAVY WEIGHT ON TOP OF THE PILE. IN A FEW DAYS, THE LEAF WILL BE DRIED OUT AND FLATTENED SO THAT IT CAN BE FASTENED IN A SCRAPBOOK WITH NARROW STRIPS OF SCOTCH TAPE.

213. TERRARIUM.
MATERIALS - WHILE ON A NATURE WALK HAVE STUDENTS GATHER MATERIALS AND LIVE SPECIES THAT WILL BE PART OF TERRARIUM. SMALL TURTLES, SNAILS, GROUND WORMS, INSECTS, TOADS, MOSSES, SOIL, SOME ROCKS, A FEW COVERED WITH COLORED LICKEN.

CONSTRUCTION - PLACE SOIL, ROCKS, MOSSES IN BOTTOM OF AQUARIUM. ADD LIVE SPECIMENS. IF ANY TOADS ARE PRESENT, USE SCREENING FOR COVER. KEEP MOIST. TURTLES MAY BE FED HAMBURGER MEAT, WORMS, INSECTS. AQUATIC TURTLES MUST BE FED UNDER WATER.

219. SIT UPONS. TAKE 14 NEWSPAPER SHEETS AND FOLD LENGTHWISE SEVERAL TIMES INTO STRIPS. WEAVE STRIPS INTO SQUARE LEAVING ENOUGH ON THE ENDS TO FOLD OVER TO FASTEN. TUCK AND FOLD THE ENDS AND IF NECESSARY FASTEN WITH STAPLES. CUT OIL CLOTH OR PLASTIC TO FIT MAT. SEW THE OPEN SIDES WITH YARN OR PLASTIC LACING.

229. GATHER VARIOUS TYPES OF SEEDS I.E., ACORNS, MILK, PODS, BURRS AND USE TO MAKE A COLLAGE. IDENTIFY THE MATERIALS USED.

244. MAKE A TRIPOD TO HOLD A COOKING POT ABOVE THE FIRE BY LASHING TOGETHER 3 GREEN STICKS. FROM THE LASHING HANG A HOOK.

270. PRESERVING LEAVES. PEEL OFF ONE LAYER OF A TWO PLY TISSUE. ARRANGE LEAVES, FLOWERS, AND OTHER ITEMS PICKED UP FROM A NATURE HIKE. ARRANGE ON PIECE OF WAX PAPER. PUT THE TISSUE OVER THE ARRANGEMENT, MAKING SURE ALL OF IT IS COVERED. USING A HALF-AND-HALF MIXTURE OF WATER AND ELMER S GLUE, DAB THE TISSUE WITH A PAINT BRUSH UNTIL IT IS WELL SATURATED. IT WILL DRY CLEARLY, SHOWING THE MOUNTED ARTICLES.

273. GOOD S EYES. TAKE TWO STICKS AND CROSS THEM TO FORM AN X . USING DIFFERENT COLORS OF YARN, RAFFIA, STRING, ETC., BEND THE CENTER TOGETHER. PUT END OF YARN ON TOP OF STICK. BRING YARN UNDER STICK, THEN FOLD OVER, GOING ON O NEXT STICK. OVER UNDER, OVER TO NEXT STICK. KEEP WRAPPING, SWITCHING COLORS OFTEN. WHEN DESIGN IS COMPLETE, TIE OFF. MAKE MOBILES, NECKLACES, ETC., WITH GOD S EYES.

276. ACORN NECKLACE OR BRACELET. COLLECT A BAG FULL OF ACORNS. PIN THEM TO A THIN LEATHER STRIP. PUT COMMON PIN THRU LEATHER, THEN THE TOP OF THE ACORN. CLIP OFF THE PART OF THE PIN THAT PROTRUDES THROUGH THE END OF THE ACORN. DAB THE PARTS WHERE THE PEN GOES THROUGH WITH GLUE.

280. STAIN AND VARNISH PIECES OF SCRAP WOOD AND GLUE NATURAL OBJECTS ON THE WOOD TO MAKE A COLLAGE.

281. DRY WILD FLOWERS BY HANGING THEM UPSIDE DOWN IN A COOL PLACE OUT OF ANY DIRECT SUNLIGHT.

282. CARVING AND WHITTLING. USING A PIECE OF SOFT WOOD, CARVE A SPOON OR LADDLE WHICH CAN BE USED AS A UTENSIL IN EATING OR COOKING.

285. OUTSIDE FEELINGS TEXTURE RUBBINGS IN WOODS . PUT PIECE OF PAPER OVER OBJECT SUCH AS A STONE OR BARK AND RUB WITH CRAYON. PATTERN OF TEXTURE WILL COME THROUGH.

286. TECHNIFAX PRINTS. MATERIALS - TECHNIFAX PAPER, SUNLIGHT OR FLOAT LIGHT, AMONNIA IN LIDDED CAN, PANE OF GLASS OR PLEXIGLASS, NATURE OBJECTS. ARRANGE NATURE OBJECTS ON THE TECHNIFAX PAPER. PUT THE GLASS OVER THEM TO HOLD OBJECT IN PLACE. EXPOSE TO LIGHT FOR ABOUT 2 MINUTES UNTIL PAPER IS WHITE. TAKE OBJECTS OFF, AND PUT IT FACE DOWN OVER THE CAN OF AMONNIA MOVING IT BACK AND FORTH. PRINTED PART WILL BECOME DARK BLUE. KEEP THE LID ON THE AMONNIA AS ITS FUMES WEAKEN QUICKLY.

288. ON A NATURE HIKE, HAVE THE CHILDREN GATHER FLOWERS, SEEDS AND OTHER

NATURE OBJECTS. GIVE EACH CHILD A SMALL BOX AND A VARIETY OF COLORED TISSUE PAPER. MIX IN A BOWL, 1 PART GLUE AND 1 PART WATER. PAT A SMALL PIECE OF TISSUE PAPER ON THE BOX AND SOAK WITH GLUE USE PAINT BRUSH . CONTINUE WITH OTHER COLORS UNTIL BOX AND TOP IS COVERED. ARRANGE NATURE ITEMS ON THE BOX TOP AND COAT THOUROUGHLY WITH GLUE MIXTURE. TWO COATS OF GLUE MAT BE NEEDED. INSIDE OF BOX MAY BE DONE ALSO.

289. LEAF PRESSING. COLLECT A GROUP OF PRETTY LEAVES. PUT ONE OR TWO ON A PIECE OF WAX PAPER. PUT ANOTHER PIECE OF WAX PAPER OVER THE TOP OF THE LEAVES AND PRESS WITH WARM FLAT IRON. BE SURE IRON IS NOT TOO HOT.

290. GATHER LEAVES FROM A NUMBER OF SPECIES OF TREES. MAKE RUBBINGS AND IDENTIFY.

305. WOOD DISPLAY. COLLECT BRANCHES FROM DIFFERENT TYPES OF TREES. CUT STICKS INTO UNIFORM SEGMENTS SUCH AS 3 INCHES IN LENGTH AND 2 INCHES IN DIAMETER. USE A HAND SAW TO CUT HALF WAY DOWN TO THE MIDDLE LENGTHWISE AND THEN CUT THE WOOD ACROSS. SAND DOWN THE EXPOSED WOOD, VARNISH HALF TO BRING OUT COLOR. MOUNT STICKS ON A DISPLAY AND LABEL EACH ONE.

306. USE A CAMERA TO TAKE PICTURES OF CLOUDS. IDENTIFY EACH CLOUD AND RECORD THE WEATHER IT BROUGHT.

307. MAKE A NUMBER CHART BY GLUING LEAVES, FLOWERS, STICKS OR OTHER LIKE OBJECTS FOUND IN THE OUT OF DOORS. USE HEAVY CARDBOARD TO DISPLAY OBJECTS.

311. STONE CREATURES. FIND SMOOTH STONES FROM ALONG STREAMS, OR LAKE SHORES. USE EPOXY GLUE TO FORM CREATURES BODIES. PAINT EYES, ETC. WITH ENAMEL PAINT SUCH AS NAIL POLISH OR MODEL PAINTS.

314. USE CHALK TO TRACE SHADOWS. A FLAT SURFACE SUCH AS A PARKING LOT OR SIDEWALK WORKS WELL.

331. GO TO THE EDGE OF A MARSH AND PULL OR CUT INDIVIDUAL LEAVES FROM CATTAILS. DO NOT PULL THE WHOLE PLANT. IF THE LEAVES ARE DRY, SOAK FOR 5 MINUTES. NEXT LAY 8 TO 15 LEAVES SIDE BY SIDE ON THE GROUND. BEGIN TO WEAVE CATTAIL LEAVES UNDER ONE, OVER ONE, ETC. CROSSWISE OVER THESE 8 TO 15 LEAVES. START THE SECOND LEAVES OVER ONE, UNDER ONE, OVER ONE, CONTINUE TILL YOU HAVE A SQUARE MAT WITH LOOSE ENDS STICKING OUT ALL SIDES. TUCK EACH LOOSE END OF EACH REED AROUND THE END AND BACK UNDER THE NEXT REED. LEAVE A SMALL LOOP AT THE END IF YOUR REEDS TEND TO BREAK. CUT OFF ANY EXCESS REED AFTER YOU HAVE LOOPED IT UNDER HANG IT UP TO DRY.

345. MAKE POINTS OUT OF CRUSHED ROCKS. FIND PURPURITE - PURPLE, SANDSTONE - YELLOW AND RED, HEMSTITE - RED, CINNABAR - RED, ORPIMENT - BRIGHT YELLOW, SULPHER - YELLOW, MALACHITE - GREEN, CHRYSOCOLLA - BLUE GREEN, AZURITE - BLUE, GYPSUM - WHITE, GALENA - BLACK, MAGANESE - FLAT BLACK, FLOURITE - MEDIUM PURPLE, CALCITE FLUOESCES - RED, HYROZINCITE FLUORESCES - BLUE, WILLIAMITTE FLUORESCES - GREEN. PAINT CRUSHED ROCKS WITH ACRYLIC COMPOUND ON TO ROCKS OR CANVASS.

355. CRAFTS. USE NATURAL PAINT BRUSHES SUCH AS GRASS, FLOWERS, OR BARK.

500. CONSTRUCTING A TERRARIUM - A FINE LIVING STUDY OF PLANTS AND ANIMALS CAN OCCUR IN RECONSTRUCTING THE NATURAL ENVIRONMENT IN A TERRARIUM.

A TERRARIUM CAN BE SET UP IN A FISH BOWL, AQUARIUM, A GALLON JAR, OR A GLASS BOX. A LARGE GLASS BOX TERRARIUM PROVIDES MUCH VALUABLE INFORMATION AND SPACE FOR PLANTS TO GROW AND SMALL ANIMALS TO MOVE ABOUT. HAVE A GROUP OF CHILDREN BRING IN A COOKIE SHEET OR A SHEET OF MEDIUM GAUGE ALUMINUM. THIS SHOULD BE AT LEAST 2 1/2 LARGER ALL AROUND THAN THE GLASS PIECE TO BE USED FOR THE BOTTOM, SO THAT THE EDGES CAN BE BENT UP TO FORM A TRAY. MEASURE SIDES AND ENDS CAREFULLY ALLOWING FOR GLASS THICKNESS AND HAVE A HARDWARE STORE OR THE CUSTODIAN CUT THEM TO SIZE. SANDPAPER THE EDGES TO SMOOTH THE GLASS AND PREVENT CUTS. TAPE 1 LONG AND 1 SHORT PIECE TOGETHER TO FORM THE SIDES OF THE BOX MYSTIC OR OTHER STRONG WATER RESISTENT TAPE - 1 1/2 WIDE . MAKE FREE MOVING CORNER JOINTS 1/8 SPACE BETWEEN PANES OF GLASS . SET UP SIDES AT RIGHT ANGLES TO EACH OTHER AND TAPE TO BOTTOM. THE BOTTOM IS TAPED ALL AROUND TO THE SIDES. THIS HOLLOW BOX RESTS IN AN ALUMINUM BASE. THE TOP IS TAPED ON AFTER THE TYPE OF TERRIUM DESIRED IS ESTABLISHED.

524. CHILDREN, WITH THE HELP OF THE TEACHER, SELECT AND PREPARE A GREEN STICK FOR COOKING OVER A CAMPFIRE. STICKS SHOULD BE STRAIGHT AND ABOUT 24 LONG. SMALL TWIGS SHOULD BE REMOVED FROM THE SIDES OF THE STICK. CHILDREN THEN PUT MARSHMALLOWS ON THE STICKS AND COOK OVER COALS. IT WILL BE EVIDENT THAT STICK COOKING TAKES PATIENCE AND SOME COORDINATION.

537. USE MATERIALS FOUND OUT-OF-DOORS TO MAKE SIMPLE TOOLS SUCH AS A HAMMER AND A SHOVEL. CHILDREN WILL SELECT A ROUND ROCK FOR A HAMMER HEAD AND A FLAT ROCK FOR THE SHOVEL BLADE. STURDY BRANCHES ABOUT ONE TO TWO INCHES IN DIAMETER AND 12-24 INCHES IN LENGTH SHOULD BE USED FOR HANDLES. THE ROCKS MAY BE LASHED TO THE BRANCHES WITH TWINE. ROCKS SHOULD BE SELECTED WHICH HAVE NATURAL NOTCHES WHICH WILL MAKE LASHING EASIER. A COMBINATION OF SQUARE AND PARALLEL LASHING IS USED. HAMMER MAY BE USED TO DRIVE TENT PEGS INTO THE GROUND. SHOVEL MAY BE USED FOR CLEARING CAMP FIRE SITE.

544. PREPARE DRY FLOWERS. REMOVE ALL LEAVES FROM THE STEMS. POUR 1-2 INCHES OF SAND INTO A SHALLOW BOX. PLACE THE FLOWERS UPSIDE DOWN IN THE SAND. CAREFULLY POUR MORE SAND OVER EACH FLOWER TO COVER TO A DEPTH OF ABOUT 1 INCH. MAKE SURE FLOWERS DO NOT TOUCH ONE ANOTHER. PLACE BOX OF SAND AND FLOWERS IN THE SUN TO BAKE FOR 2-3 DAYS. USE FLOWERS GROWING WILD IN FIELDS OR USE MARIGOLDS, PANSIES, ROSES, SWEETPEAS OR BUTTERCUPS.

548. MAKE WOODEN TRAILSIDE SIGNS. USE BRANCHES ABOUT 3 FEET LONG AND ABOUT 1-2 INCHES IN DIAMETER FOR SIGN POSTS. THEY SHOULD BE FREE OF ALL SMALL TWIGS AND SHOULD BE POINTED AT ONE END TO MAKE IT EASIER TO DRIVE THEM INTO THE GROUND. THE FACE OF THE SIGN MAY BE MADE FROM SCRAP PIECES OF WOOD ABOUT 5 X 8 . THE TWO ENDS OF THE SIGN FACE MAY BE MADE JAGGED WITH A COPING SAW TO GIVE THE SIGN A RUSTIC LOOK. THE SIGN IS THEN POINTED AND NAILED TO THE POST. THE SIGN MAY BE LETTERED WITH INDIA INK AFTER PREPARING THE SURFACE WITH FULLER S EARTH TO PREVENT THE INK FROM RUNNING. TRAILSIDE SIGNS OFTEN INFORM HIKERS OF INTERESTING NATURAL OBSERVATIONS.

549. MAKE A WILDLIFE CENTERPIECE OR PLAQUE. USE DRIFTWOOD OR A 1 THICK CROSS SECTION OF A LOG FOR THE BASE. ATTACH VARIOUS DECORATIVE MATERIALS TO THE BASE WITH ELMERS GLUE AND SPRAY WITH A CLEAR LACQUER. SOME MATERIALS FOR ARRANGEMENT ARE - PINE CONES OF VARIOUS SIZES, SMALL DRIED FLOWERS, ACORNS, DRIED WHEAT OR RYE, LARGE SEEDS SUCH AS SUNFLOWER, DRIED FERN SPRAYS, MOSSES, CAT TAILS, PUSSY WILLOW, BARK, DRIED BERRIES AND BRACKET FUNGUS. COLLECTION ITEMS SHOULD BE CAREFULLY

COLLECTED IN BOTTLES, BAGGIES, PRESSED BETWEEN MAGAZINE PAGES, ETC. AND CAREFULLY PACKED IN A BACK PACK.

INDIVIDUAL MATERIALS

INDIVIDUAL MEASURING DEVICES

10. GIVEN A BAG CONTAINING STICKS, ACORNS, OTHER NUTS, FLOWERS, LEAVES, ETC., MAKE SOMETHING USING THE THINGS IN THE BAG.

74. MAKE CRAFT ITEMS FROM THINGS OBTAINED ON A HIKE TO GIVE TO PARENTS OR FRIENDS.

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - ROSE MARY L.

OBJ. 27

27. TO REFINE COMMUNICATION SKILLS WITHIN THE CONTEXT OF OUTDOOR EXPERIENCE.

INDIVIDUAL ACTIVITIES

1. BLINDFOLD THE CHILDREN AND HAVE THEM TOUCH A TREE S BARK. WHILE DOING THIS HAVE THEM DESCRIBE HOW IT SMELLED, FELT AND TASTED TASTE WITH DISCRETION . HAVE CHILDREN FEEL NEEDLES OR LEAVES FOR GENERAL SIZE, SHAPE, AND CLUSTERING. FROM THE DESCRIPTION LOOK UP THE TREE IN A FIELD GUIDE.

3. MEASURE THE CIRCUMFERENCE OF VARIOUS TREES. STRING, MEASURING TAPE OR ROPE CAN BE USED. CONDUCT A CONTEST AND SEE WHO CAN FIND THE WIDEST AND NARROWEST TREE.

7. BEFORE LEAVING FOR AN OUTDOOR EXPERIENCE MAKE UP A LIST OF INDIVIDUAL RESPONSIBILITIES OR JOBS FOR EACH DAY. ASSIGN EACH CHILD SEVERAL JOBS EACH DAY SUCH AS FIRE BUILDING, CLEANING UP, ACTIVITY LEADER, ETC.. STRESS THAT IT IS HAS RESPONSIBILITY TO CARRY OUT HIS JOB FOR HIS BENEFIT AND THE BENEFIT OF THE GROUP.

8. ON A NATURE WALK OR HIKE LOOK FOR A TREE STUMP WITH DISTINCT RINGS. RAISE SUCH QUESTIONS AS -
   - HOW CAN WE TELL THE AGE OF THE TREE WHEN IT WAS CUT
   - HOW CAN WE DETERMINE GOOD AND BAD GROWING YEARS
   - WHAT MAKES A GOOD OR BAD GROWING YEAR
   - DO WE SEE ANY LIFE ON OR AROUND THE STUMP
   - WHAT ARE SOME THINGS THAT HAPPEN TO STUMPS.

9. MAKE A TRACING OF GROWTH RINGS ON THE STUMP USING TRACING PAPER. DETERMINE THE AGE OF THE TREE BY COUNTING THE RINGS. ASSUMING THAT THE TREE WAS CUT DOWN DURING THE PAST YEAR, LABEL CERTAIN RINGS ACCORDING TO THE YEAR IN WHICH IT GREW. LABELS MAY BE MADE OF WOOD AND ATTACHED TO THE STUMP WITH A THIN NAIL. IF LABELS ARE MADE OF CARDBOARD, THEY CAN BE MADE TO LAST LONGER BY SPRAYING WITH A PLASTIC SPRAY. KRYLON

10. TRY TO DETERMINE HOW A TREE WAS CUT, FROM WHICH DIRECTION, AND THE INSTRUMENT USED. USE FIELD GUIDES TO DETERMINE WHAT KIND OF A TREE IT WAS.

11. HAVE THE CHILDREN MEASURE THE DISTANCE AROUND THREE OR FOUR STUMPS WITH A KNOTTED ROPE OR TAPE MEASURE. DISCUSS THE RELATIONSHIP BETWEEN THE NUMBER OF RINGS AND THE CIRCUMFERENCE OF THE STUMP. THE LARGER THE TRUNK, THE OLDER THE TREE.

12. AFTER EXAMINING STUMP RINGS WRITE A STUMP STORY ABOUT THE LIFE OF A TREE.

36. TINKERBELL TAG. PLAY TAG WITH FLASHLIGHTS. TWO CHILDREN ARE GIVEN FLASHLIGHTS. ONE CHILD PLAY S IT AND USES HIS BEAM TO CHASE THE OTHER S BEAM. WHEN THE TWO BEAMS COINCIDE, THE IT PLAYER SCORES. CHILDREN CAN COUNT OUT THE TIME. IF THE IT PLAYER HAS NOT CAUGHT THE OPPONENT BY THE COUNT OF 25 THE OPPONENT SCORES. CHILDREN CAN LIMIT THE PLAYING FIELD TO THE CEILING OR INCLUDE WALLS.

45. FEED PIECES OF GORP A HIGH ENERGY FOOD TO A BLINDFOLDED CHILD. HAVE CHILD RECALL FROM MEMORY THE ORDER OF PIECES. START WITH THREE PIECES AND BUILD UP NUMBER AS CHILD S ABILITY TO DISCRIMINATE TASTES AND RECALL ORDER INCREASE. HAVE ANOTHER CHILD RECORD THE ORDER OF PIECES AS THEY AS GIVEN.

51. ANIMAL DISCUSSION. DISCUSS LIFE FUNCTIONS OF ANIMALS EATING, MOVING, SLEEPING, MAKING HOMES AND REPRODUCING . MAKE A LIST OF THE SIGNS WHICH ANIMALS LEAVE ACCORDING TO FUNCTION. FOR EXAMPLE -

A. SOME FEEDING SIGNS -
   TREES STRIPPED OF BARK
   SCRATCHING OR DIGGING OF EARTH
   GNAWED FRUIT, PITS, NUTS, CONES.
B. HOME-MAKING SIGNS -
   HOLES IN TREE TRUNK
   TUNNELS
   DAMS
C. SOME TRAVEL SIGNS -
   BAR BRUSHED OR BROKEN FROM TREES
   FEATHERS OR BITS OF FUR
   TRACKS IN SNOW, DUST, OR MUD.
D. OTHER SIGNS -
   BIRD CALLS AND SONGS
   FLIGHT PATTERNS

FIND SOME ANIMALS WHICH MIGHT LEAVE SUCH A SIGN.

56. MEASURE A PERSON S PACE IN FEET. TAKE THE AVERAGE LENGTH OF FIVE PACES. DIVIDE LENGTH OF PACE INTO MILE TO FIND HOW MANY PACES IN A MILE FOR AN INDIVIDUAL.

61. FROG BOAT. USE A SCRAP PIECE OF WOOD APPROXIMATELY 1 - 2 INCHES THICK. ATTACH A CANDLE TO MIDDLE. PUT A STRING ON BOAT. FLOAT BOAT INTO POND AT NIGHT. WATCH FROGS HOP ON BOAT. PULL IN SLOWLY FOR A CLOSER LOOK. DISCUSS WHY FROGS GO ON BOAT.

82. A BUR IN.
- PICK OUT A GOOD POISON IVY FREE FIELD FILLED WITH WEEDS AND BURS
- GO TO THE SITE OF THE BUR-IN
- WALK, RUN, SKIP, ROLL IN THE GRASS, PLAY HIDE AND SEEK, PICK UP LITTER. LOOK FOR DISCOVERIES WALK IN LINES THEN SIDE BY SIDE.
- RETURN TO CLASS ROOM - REMOVE BURS AND PLACE ON WHITE PAPER AND GLUE DOWN ON INDIVIDUAL SHEETS.
- GIVE REWARDS FOR THE MOST DIFFERENT KINDS OF BURS, LARGEST NUMBER OF INDIVIDUAL BURS, BIGGEST BURS, SMALLEST BUR.

90. PROVIDE CHILDREN WITH BAGS TO COLLECT LITTER WHILE HIKING. DISPOSE OF PROPERLY. MAKE UP CREATIVE STORIES ABOUT THE ORGINATION AND PATH OF LITTER FOUND -
- CITY WHERE BOTTLE, CAN, OR PAPER WAS MADE
- HOW LONG HAS IT BEEN EXPOSED
- WHAT PLANT AND ANIMAL LIFE HAVE COME IN CONTACT WITH THE LITTER
- WHAT YEAR WAS THE MATERIAL MADE.

101. HAVE A CHILD PACE THE DISTANCE BETWEEN TWO TREES. THEN HAVE HIM MEASURE THE DISTANCE WITH A YARDSTICK, KNOTTED STRING OR TAPE MEASURE. REPEAT WITH OTHER STUDENTS. COMPARE FINDINGS AND DISCUSS WHY THEY DIFFER.

113. MAKING NATURAL DYES. MATERIALS - BERRIES, STEMS, BARKS, FLOWERS CAN BE USED TO MAKE DYES THAT WILL COLOR CLOTH OR YARN. USE RIPE BERRIES

FLOWERS AND LEAVES AT FULL BLOOM, ROOTS COLLECTED IN EARLY FALL.
- MAKE THE DYE - CHOP THE PLANTS INTO SMALL PIECES, COVER WITH WATER AND SOAK OVERNIGHT. BOIL FOR AN HOUR OR MORE UNTIL COLOR IS MUCH DEEPER THAN YOUR DESIRED COLOR. STRAIN TO REMOVE ALL PIECES OF PLANTS.
- PREPARE MATERIAL - WASH AND RINSE CLOTH AND YARN. ADD 1/4 OUNCE OF ALUM TO A GALLON OF WATER. SOLD IN SPICE SECTION OF GROCERY STORE FOR VEGETABLE FIBER COTTON, LINEN OR RAYON ADD 1/4 OUNCE WASHING SODA. FOR ANIMAL FIBER SILK OR WOOL ADD 1/4 OUNCE CREAM OF TARTAR BOIL CLOTH FOR ONE HOUR. RINSE AND DRY.
- DYE THE MATERIAL - USING A LARGE ENAMEL KETTLE ADD ENOUGH WATER TO COMPLETELY COVER THE MATERIAL. BRING LIQUID TO A BOIL AND STIR WITH A WOODEN STICK FOR 1/2 HOUR TO AN HOUR. TO SET DYE ADD 1/2 CUP OF VINEGAR OR ONE TABLESPOON OF SALT AND BOIL FOR 15 MINUTES. RINSE THE CLOTH AND HANG TO DRY.

121. MARKING A TRAIL. DIVIDE THE CLASS INTO TWO GROUPS. HAVE ONE GROUP GO OUT AND MARK A TRAIL USING NATURAL OBJECTS. AFTER 15 - 20 MINUTES THE NEXT GROUP FOLLOWS THE MARKINGS. SOME GOOD MARKINGS ARE -
- TWO STONES ON TOP OF EACH OTHER MEANS KEEP GOING
- ONE LONG STICK AND 2 SHORT STICKS IN THE SHAPE OF AN ARROW MEANS GO THIS WAY
- MANY SMALL STONES IN A CIRCLE MEANS THE END OF THE TRAIL
- HAVE THE CLASS INVENT THEIR OWN TRAIL SIGNS AND MAKE UP A BOOKLET.

EMPHASIZE THAT ONLY NATURAL BIOGRADEABLE MATERIALS SHOULD BE USED. DO NOT PERMIT PAINTING ON OR GOUGES IN TREES.

131. COMPARE PAIRS OF DIFFERENT PLANTS FOR SOME OF THE FOLLOWING - COLOR, ROOT SHAPES, LOCATION, SMELL, LEAF SHAPES, AND EDIBLE VALUE TO MAN. CHARTS CAN BE MADE TO ILLUSTRATE LIKENESSES AND DIFFERENCES.

133. PLAY A SERIOUS GAME APPLYING FIRST AID SKILLS YOU HAVE DISCUSSED IN THE CLASS. LET ONE CHILD OR VARIOUS VOLUNTEERS BE THE VICTIMS AND APPLY THE FOLLOWING FIRST AID -
- SHOCK
- BRUISES
- SPLINTERS
- ARTIFICAL RESPIRATION
- USE OF A TRIANGULAR BANDAGE
- FAINTING
- SNAKE POISONING
- PRESSURE POINTS TO STOP BLEEDING

REFER TO THE RED CROSS FIRST AID BOOK FOR TECHNIQUES.

135. FIRE BUILDING AND WATER BOILING. TWO CHILDREN MAKE UP A TEAM. ON GO THEY PLACE A POT ON A SUITABLE SUPPORT, GATHER WOOD, STRIKE A MATCH OR USE FLINT AND A KNIFE, LIGHT FIRE AND KEEP IT GOING UNTIL WATER BOILS OVER EDGE OF POT. TEAM TO MAKE FIRE USING ONLY NATURAL MATERIALS AND THAT BOILS THE WATER OVER THE TOP OF THE POT WINS.

139. MINUTE JUDGING. EVERYONE SITS ON THE FLOOR. THE LEADER LOOKS AT WATCH AND SAYS GO . THE CHILDREN TRY TO GUESS WHEN THE MINUTE IS OVER. REPEAT USING OTHER LENGTHS OF TIME.

149. COLLECT PLANTS THAT ARE UNHEALTHY OR DISCOLORED AND TRY TO DETERMINE WHY. NATURAL AND MAN S DAMAGE TO PLANT LIFE CAN BE OBSERVED. REPLANT THESE SPECIMENS AND TAKE PROPER CARE OF THEM. WHAT HAPPENS.

150. DISCOVER WHAT THE CLASS CAN DO TO AID VARIOUS ANIMALS IN THEIR ENVIRONMENT. AN EXAMPLE WOULD BE FINDING OUT WHAT TYPE OF NESTING

INVOLVE STUDENT RESPONSIBILITY IN SELECTION.

198. WHEN SLEEPING OUTDOORS A CAMPER SHOULD TRY TO SET UP HIS BEDROLL BEFORE DARK. FIRST LAY A SHEET OF PLASTIC ON TOP OF THE GROUND. ALL STICKS AND PROTRUDING STONES SHOULD ALSO BE REMOVED. NEXT, LAY SOME SORT OF FOAM PAD OVER THE PLASTIC - THIS IS FOR INSULATION. FINALLY, LAY THE SLEEPING BAG OVER THE PAD. IF DESIRED, A PILLOW CAN BE MADE FROM SHIRTS OR OTHER CLOTHING ITEMS. TRY TO SITUATE A SLEEPING PLACE THAT IS FLAT OR WITH THE HEAD SLIGHTLY ELEVATED.

199. GATHER VARIOUS TYPES OF SEEDS FROM THE OUT OF DOORS. DISCUSS HOW THE SEED IS TRANSPORTED.

205. VISUAL LITERACY. MOUNT NEW SIGN SYMBOLS FROM DEPT. OF TRANSPORTATION, NATIONAL PARK SYSTEM OR INTERNATIONAL DRIVING SYMBOLS ON 3 X 5 INDEX CARDS. INTERPRET MEANINGS OF THESE SYMBOLS. MANY NEWER CAMP GROUNDS AND NATIONAL PARKS ARE USING THESE SIGN-SYMBOLS.

207. BIRD CALENDER. DIVIDE A LARGE PIECE OF RULED CHART PART, OAK TAG OR CONSTRUCTION PAPER INTO FOUR COLUMNS LABELED - DATE, BIRDS' NAME, WHERE SEEN, TIME OF DAY. THE CHART MAY BE PERMANENTLY HUNG IN CLASSROOM AND OBSERVATIONS FROM EACH FIELD TRIP ADDED. A DIFFERENT CHART MAY BE KEPT FOR EACH SEASON OF THE YEAR.

209. LEAF COLLECTIONS. COLLECT LEAVES IN LATE SUMMER AND EARLY FALL TO PRESERVE THEM, PLACE EACH LEAF BETWEEN SHEETS OF NEWSPAPER, WITH SEVERAL SHEETS ABOVE AND MORE BELOW, AND WITH A HEAVY WEIGHT ON TOP OF THE PILE. IN A FEW DAYS, THE LEAF WILL BE DRIED OUT AND FLATTENED SO THAT IT CAN BE FASTENED IN A SCRAPBOOK WITH NARROW STRIPS OF SCOTCH TAPE.

217. MAKE MAPS OF THE SCHOOL TO SCALE SHOWING HALLS, ROOMS, PARKING LOTS, PLAYAREAS, OFFICES, BATHROOMS, ETC..

220. DESCRIBE WEATHER IN TERMS OF CLOTHES NEEDED FOR AN OUTSIDE ACTIVITY. MAKE A CALENDER AND RECORD THE NUMBER OF SWEATER , RAIN COAT , ETC., DAYS IN A MONTH.

224. USING A MALE OR FEMALE FORM, DRESS THE FIGURE ACCORDING TO WEATHER AND ACTIVITY.

225. MAKE A MAP OF THE ROOM SO A VISITOR COULD FIND WHAT HE NEEDED. INCLUDE DESKS, WINDOWS, DOORS, BOOK CASES, ETC. THE TEACHER SHOULD DETERMINE DETAIL.

226. YOU ARE LOOKING DOWN AT YOUR BEDROOM FROM THE CEILING. WHAT DO YOU SEE. DRAW A PICTURE FROM THAT PERSPECTIVE. THE TEACHER SHOULD DETERMINE DETAIL OF DRAWING.

227. IN A CIRCLE DISCUSSION SESSION, TALK ABOUT WHY YOU NEED TO HAVE A BALANCED DIET. DISCUSSION SHOULD BE TAILORED TO CLASS ABILITY.

229. GATHER VARIOUS TYPES OF SEEDS I.E., ACORNS, MILK, PODS, BURRS AND USE TO MAKE A COLLAGE. IDENTIFY THE MATERIALS USED.

231. TAKE A LARGE BRANCH AND CONSTRUCTION PAPER LEAVES AND MAKE YOUR OWN TREE. DISCUSS WHAT YOU MIGHT FIND IN OR ON THE TREE. MAKE THESE VARIOUS THINGS AND PLACE THEM IN YOUR TREE.

233. MAKE OR GET PICTURES OF IFFERENT ANIMALS. HAVE THE CHILDREN

BOXES DO MARTINS LIKE AND THEN BUILDING ONE AND SETTING IT UP IN THE PROPER ENVIRONMENT.

157. COLLECT, SAW TO A UNIFORM SIZE AND SHAPE, AND LABEL A COLLECTION OF VARIOUS WOODS.

158. SELECT A KNOWN CAMP SIGHT AND TRY TO IDENTIFY WHY IT WAS CHOSEN.

164. GATHER DRY WOOD OFF THE GROUND OR LOW, DEAD BRANCHES OF TREES FOR THE WOOD PILE. THEN SORT THE WOOD INTO THREE TYPES TINDER, TINY STICKS TO START BURNING FROM THE FIRST FLAME OF THE MATCH OR SPARK FROM FLINT KINDLING, LONG NARROW STICKS, NO THINKER THAN THUMB, TO MAKE FIRE LARGER , AND FUEL, THICK STICKS TO KEEP THE FIRE BURNING.

165. GATHER WOOD ACCORDING TO GIVEN SPECIFICATIONS. FOR EXAMPLE - 20 PIECES OF KINDLING, 10 OF TINDER, AND 5 OF FUEL.

166. NATURE HUNT. SHOW THE CLASS AN EXHIBIT OF SEVERAL LABELED NATURE SPECIMENS IE, LEAVES, FLOWERS, TWIGS, ROCKS . DIVIDE INTO GROUPS AND SEE HOW MANY ARE FOUND.

173. SIGNS OF THE SEASON HIKES. GO ON HIKES DURING THE VARIOUS SEASONS. WHAT SIGNS OF THE SEASON DO YOU SEE AND HEAR.

174. GIVEN A COLLECTION OF LEAVES TAKEN FROM VARIOUS TREES AND PLANTS, HAVE THE STUDENTS MATCH THE LEAF TO THE RESPECTIVE TREE OR PLANT.

176. ADOPT A TREE NEAR YOUR SCHOOL THAT YOU CAN VISIT EVERY WEEK. OBSERVE AND RECORD CHANGES.

178. ASSIGN A CONSTELLATION TO EACH STUDENT. ON DARK PAPER THE SIZE OF THE TOP OF A COFFEE CAN, THE STUDENTS WILL PUNCH HOLES FOR STARS IN THE SHAPE OF THE CONSTELLATION. PLACE A FLASHLIGHT IN THE COFFEE CAN AND THE CONSTELLATION ON TOP. DIRECT THE FORM TOWARD THE CEILING.

179. MAKE A CLASS GUIDE OF CONSTELLATIONS. TAKE IT WITH THE CLASS WHEN CAMPING AND SEE HOW MANY YOU CAN FIND.

185. SILENT FUN. AFTER VARIOUS FLAG OR WHISTLE SIGNALS HAVE BEEN ESTABLISHED, GIVE SIGNALS AND SEE IF THEY ARE RECOGNIZED. VERBAL OR WRITTEN ANSWERS CAN BE USED.

187. THE LEAKING PACKSACK. THE TEACHER SHOULD ARRANGE VARIOUS OBJECTS THAT MIGHT BE FOUND IN A PACK ALONG A PATH. THE STUDENTS WALK ALONG THE PATH IN SINGLE FILE. AFTER THE WALK IS FINISHED RECORD WHAT ARTICLES WERE OBSERVED.

191. KEEP A LIST OF THE FOOD EACH CHILD EATS FOR ONE DAY. CHECK THE LIST AGAINST THE FOUR BASIC FOOD GROUPS TO ILLUSTRATE A BALANCED OR UNBALANCED DIET. THE LIST MAY BE WRITTEN BY THE CHILD OR THE CHILD WITH PARENT OR TEACHER HELP.

192. ILLUSTRATE THE FOODS OF THE FOUR BASIC FOOD GROUPS BY DIVIDING THE CLASS INTO GROUPS AND ASSIGNING EACH GROUP ONE FOOD GROUP. THE GROUP CAN DECIDE TO USE DRAWINGS AND/OR PICTURES OF THE FOODS.

195. USING A PLANNED MENU FOR ONE OR ALL THREE MEALS, PREPARE A SHOPPING LIST. THE TEACHER MAY WRITE IT OR THE CHILDREN CAN DO IT INDIVIDUALLY OR IN GROUPS. USING NEWSPAPER ADS ESTIMATE THE TOTAL COST OF THE LIST. IDENTIFY COMPARATIVE SHOPPING USING EXAMPLES OR, IF POSSIBLE,

CATEGORIZE ANIMALS TO TRAITS SUCH AS WHAT THEY EAT, MODE OF MOVEMENT, WHERE THEY LIVE, TYPE OF ANIMAL FISH, MAMMAL, BIRD, ETC. AND WHETHER THEY ARE NOCTURNAL.

234. USING THE ANIMALS THAT YOU COULD ENCOUNTER IN AN OUTDOOR EXPERIENCE, SHOW THEIR HOME AND ITS SURROUNDINGS. MODELS OR PICTURES COULD BE USED.

236. MAKE A NOTEBOOK SHOWING SOME OF THE ANIMALS, BIRDS, FLOWERS AND TREES ENCOUNTERED IN OUTDOOR EXPERIENCES. DRAW THE PICTURES AND IDENTIFY THEM IN SOME FASHION.

239. PRETEND YOU ARE EXPLORERS. WHAT WOULD YOU NEED FOR YOUR EXPEDITION. SOME THINGS THAT MIGHT BE DISCUSSED ARE LENGTH OF EXPEDITION, CLIMATE, MEANS OF TRANSPORATION, FOOD, CLOTHING, SHELTER USE NON-JUDGMENTAL TECHNIQUES .

240. PRETEND YOU HAVE TRAVELLED MANY MILES TO START A NEW COMMUNITY. WHAT DO YOU NEED TO HAVE FOR THE ENTIRE COMMUNITY. USE A NON-JUDGMENTAL DISCUSSION TO GET AT NEED TO MEET BASICS SUCH AS FOOD AND SHELTER AS WELL AS IT BEING NECESSARY TO WORK COOPERATIVELY.

242. DIVIDE THE CLASS INTO WORK GROUPS TO ILLUSTRATE USING PICTURES, DRAWINGS, OR PAINTINGS WHAT THEY FOUND IN THE FOREST AND IN THE POND.

243. SCAVENGER HUNT.
MAKE A LIST USING PICTURES OR WORDS OF PLANTS AND/OR ANIMALS THE CHILDREN ARE TO FIND. THE CHILDREN SHOULD BE ABLE TO DESCRIBE OR DRAW THE ANSWER BUT NOT COLLECT OR PICK IT.

245. USE AN OPEN AREA WITH SOME TREES AND OBJECTS IN IT. HAVE CHILDREN NOTE AN OBJECT APPROXIMATELY 40 - 50 FEET AWAY. BLINDFOLD STUDENT AND LET HIM WALK TO OBJECT. WHEN HE THINKS HE HAS REACHED HIS GOAL, LET HIM REMOVE BLINDFOLD. DISCUSS CHILD S SENSE OF DIRECTION.

259. GIVEN A DITTO WITH A LARGE OUTLINE OF A SNAKE, COLOR IN SNAKES ACCORDING TO PICTURE OF POISONOUS AND NON-POISONOUS SNAKES. LABEL EACH SNAKE. STAPE PICTURES TO MAKE A BOOK.

305. WOOD DISPLAY. COLLECT BRANCHES FROM DIFFERENT TYPES OF TREES. CUT STICKS INTO UNIFORM SEGMENTS SUCH AS 3 INCHES IN LENGTH AND 2 INCHES IN DIAMETER. USE A HAND SAW TO CUT HALF WAY DOWN TO THE MIDDLE LENGTHWISE AND THEN CUT THE WOOD ACROSS. SAND DOWN THE EXPOSED WOOD, VARNISH HALF TO BRING OUT COLOR. MOUNT STICKS ON A DISPLAY AND LABEL EACH ONE.

306. USE A CAMERA TO TAKE PICTURES OF CLOUDS. IDENTIFY EACH CLOUD AND RECORD THE WEATHER IT BROUGHT.

307. MAKE A NUMBER CHART BY GLUING LEAVES, FLOWERS, STICKS OR OTHER LIKE OBJECTS FOUND IN THE OUT OF DOORS. USE HEAVY CARDBOARD TO DISPLAY OBJECTS.

308. USE THINGS FOUND IN THE OUT OF DOORS FOR COUNTERS. ACORNS, PEDDLES, LEAVES, ETC., WILL WORK WELL.

312. TRACE THE OUTLINES OF PUDDLES ON A SIDEWALK OR PARKING LOT. TRACE AGAIN A FEW HOURS LATER AND THE FOLLOWING DAY. NOTE ANY CHANGES IN SIZE. KEEP ACCOUNT OF WEATHER CONDITIONS SUCH AS WINDS, TEMPERATURE,

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AND SUNSHINE TO EXPLAIN CHANGES.

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314. USE CHALK TO TRACE SHADOWS. A FLAT SURFACE SUCH AS A PARKING LOT OR SIDEWALK WORKS WELL.

320. ESTIMATING THE HEIGHT OF A TREE. SELECT A TREE ON LEVEL GROUND. TURN AROUND AND WALK AWAY FROM THE TREE UNTIL THAT POINT WHERE THE TOP OF THE TREE CAN BE SEEN THROUGH THE LEGS. THE DISTANCE FROM THE HEELS TO THE BASE OF THE TREE EQUALS THE HEIGHT OF THE TREE. PACE OFF DISTANCE OR MEASURE WITH A TAPE MEASURE.

339. PHOTOGRAPH LOCAL LANDFORMS, SUCH AS HILLS, SWAMPS, VALLEYS, CLIFFS, STREAMS.

345. MAKE POINTS OUT OF CRUSHED ROCKS. FIND PURPURITE - PURPLE, SANDSTONE - YELLOW AND RED, HEMSTITE - RED, CINNABAR - RED, ORPIMENT - BRIGHT YELLOW, SULPHER - YELLOW, MALACHITE - GREEN, CHRYSOCOLLA - BLUE GREEN, AZURITE - BLUE, GYPSUM - WHITE, GALENA - BLACK, MAGANESE - FLAT BLACK, FLOURITE - MEDIUM PURPLE, CALCITE FLUOESCES - RED, HYROZINCITE FLUORESCES - BLUE, WILLIAMITTE FLUORESCES - GREEN. PAINT CRUSHED ROCKS WITH ACRYLIC COMPOUND ON TO ROCKS OR CANVASS.

369. WINTER SCIENCE. IDENTIFY THE TYPES OF SNOW CRYSTALS AND CONSULT A METEOROLOGY BOOK TO DETERMINE THE ALTITUDE AND TEMPERATURE OF THEIR PRODUCTION.

458. ANALOGIES. TEACHER PRESENTS THE ANALOGY, STUDENTS SUPPLY THE MISSING WORD. ANOLOGIES MAY VARY GREATLY AS TO DIFFICULTY. THIS ACTIVITY SHOULD BE DONE ORALLY. EXAMPLE -
BIRD IS TO NEST AS RABBIT IS TO ..... HOLE, BURROW
POND IS TO WATER AS FOREST IS TO ..... TREE
GRASS - GREEN, SKY - ..... BLUE
CATTAIL - SWAMP, GRASS - ..... MEADOW

462. STUDY THE PLANTS IN A SMALL AREA NEAR YOUR HOME OR SCHOOL. IDENTIFY 10-20 DIFFERENT KINDS OF TREES, BUSHES, FLOWERS, WEEDS, AND OTHER SMALL PLANTS. A MEMBER OF THE FAMILY COULD HELP COLLECT AND PRESS LEAVES OR TAKE A PHOTO OR CHART NAMES AND DESCRIPTIONS. SHARE FINDINGS WITH THE CLASS BY NAMING THE PLANT AND/OR EXPLAINING ONE FACT ABOUT EACH PLANT.

463. GIVEN SEVERAL PAIRS OF LEAVES WHICH HAVE BEEN PRESSED AND PRESERVED INDIVIDUALLY, ALLOW CHILDREN TO PLAY A SIMPLE GAME OF SORTING LEAVES AND MATCHING EACH WITH ITS DOUBLE. SOME LEAVES ARE OBVIOUSLY DIFFERENT ALLOWING FOR GROSS DISCRIMINATION AND SOME WILL HAVE MANY SIMILARITIES ALLOWING FOR MUCH FINER DISCRIMINATION SKILLS. PAIRS OF LEAVES MAY INCLUDE - PIN OAK, BUR OAK, ELM, SUGAR MAPLE, RED MAPLE, WILLOW, SHAG BARK HICKORY, BLACK WALNUT, CHESTNUT.

464. STUDY THE PLANTS IN A SMALL AREA NEAR SCHOOL OR HOME. IDENTIFY 20 KINDS OF TREES, BUSHES, FLOWERS, WEEDS AND OTHER SMALL PLANTS. CLASSIFY THE PLANTS INTO GROUPS BASED ON FLOWERING AND NON-FLOWERING OR SEED PLANTS AND SPORE PLANTS. PLACE PRESERVED PLANT PART OR MAKE DRAWING ON A CHART TO DEMONSTRATE CLASSIFICATION SCHEME. OTHER POSSIBLE SCHEMES - BROAD LEAVES AND NEEDLES, HEIGHTS, COLORS, TEXTURES. GROUPINGS WILL DIFFER ACCORDING TO PLAN.

466. MAKE A COLLECTION OF VARIOUS KINDS OF SEEDS AND SEED PODS. OBSERVATIONS WILL BE MADE ABOUT HOW THE CONSTRUCTION OF EACH SEED ENABLES THAT SEED TO TRAVEL. AFTER CHILDREN HAVE HANDLED AND EXPERIMENTED

HOWEVER, CAUTION SHOULD BE USED WHENEVER FRICTION IS A FACTOR. NYLON WILL BURN.

97. RESOURCE PERSON. JOHN E. CARTER, SR. HONEOYE FALLS, NY 14472. SCOUTMASTER FOR 15 YEARS, HAS BEEN HIKING AND BACKPACKING FOR YEARS WITH BOYS FROM 11 YRS TO 16 YRS. KNOWS ALL THE SCOUTING CAMPING TRICKS, AND HAS A GOOD RELATIONSHIP WITH BOYS. PHONE - 716/624-2321.

INDIVIDUAL MEASURING DEVICES

2. GIVEN AN OUTDOOR EXPERIENCE, THE STUDENT WILL BE ABLE TO WRITE OR DICTATE AN ACCOUNT OF HIS EXPERIENCES IN A DIARY FORM.

17. HAVE SEVERAL CHILDREN PACK THEIR OWN PACK. MAKE SURE EACH HAS SUFFICIENT GEAR FOR ACTIVITY. HAVE CHILDREN FOLLOW A CHECK LIST FOR THIS. AFTER EACH HAS PACKED, HAVE A BLINDFOLDED CHILD TRY ON EACH PACK AND DECIDE WHICH IS THE MOST COMFORTABLE. HAVE EACH DISCUSS THEIR REASONS FOR PACKING, SUCH AS ACCESSIBILITY, WEIGHT DISTRIBUTION, NEATNESS.

58. GIVEN A PAPER BAG WITH THE FOLLOWING LETTERS WRITTEN ON THE OUTSIDE - M. S. O. W, E THE LETTERS REPRESENT THE BEGINNING SOUNDS OF THE FOLLOWING TREES - M - MAPLE, S- SASAFRASS OR SPRUCE, O - OAK, W - WILLOW, E - ELM , GO OUTSIDE AND DEPOSIT IN THE BAG ONE LEAF FOR EACH LETTER.

68. MAKE A NOTE OF THOSE PEOPLE WHO DRESSED APPROPRIATELY FOR AN ACTIVITY AND ASK THEM WHY THEY STAYED COMFORTABLE.

70. DRAW A PICTURE OR WRITE A PARAGRAPH ABOUT THE GREATEST THING LEARNED BY DOING THINGS OU-OF-DOORS.

71. MAKE A LIST ENTITLED I WENT CAMPING AND NOW I CAN..... ADD TO THE LIST WITH EACH SUCCESSIVE OUTDOOR EXPERIENCE.

92. WRITE OR TELL AN ORIGINAL SHORT STORY ABOUT AN ANIMAL OBSERVED IN THE OUTDOOR EXPERIENCE. CREATE CHARACTERS AND NAMES, A PLOT AND THE SETTING FROM YOUR IMAGINATION. WITHIN THE STORY, YOU SHOULD INCLUDE 5 SPECIFIC FACTS YOU LEARNED ABOUT THE ANIMAL SUCH AS HABITAT, EATING HABITS, NATURAL ENEMIES, ITS ROLE IN AN ECOCYCLE, COMMON OR SCIENTIFIC NAME, TRACKS, ETC. YOUR STORY SHOULD CONTAIN 200 WORDS.

96. GIVEN A LIST OF 20 DAYTIME AND NOCTURNAL ANIMALS COMMON TO THE GEOGRAPHICAL AREA, IDENTIFY AND LIST AT LEAST 5 DAYTIME ANIMALS AND 5 NOCTURNAL ANIMALS.

98. WRITE A HANDBOOK ON THE CARE AND FEEDING OF A CERTAIN ANIMAL. DESCRIBE OPTIMAL LIVING CONDITIONS WHICH FULFILL THE ANIMALS NEEDS IN THEIR WILD AND DISCUSS HOW THESE CONDITIONS MAY BE SUCCESSFULLY DUPLICATED IN CAPTIVITY. THE HANDBOOK WILL CONTAIN AT LEAST 5 THINGS THE ANIMAL NEEDS AND SUGGESTIONS FOR MEETING EACH OF THESE REQUIREMENTS.

99. USING A FIELD GUIDE FOR TREES, IDENTIFY BY NAME AT LEAST 2 PRE-SELECTED TREES. PROPER IDENTIFICATION TECHNIQUES TO BE FOLLOWED -
-DECIDE UPON MAJOR TYPE OF TREES BROADLEAF OR NEEDLE .
-FIND DISTINGUISHING CHARACTERISTICS SHAPE OF LEAF, KIND OF BARK, FRUIT, GENERAL SHAPE AND SIZE OF FULL GROWN TREE .

101. FROM A DISPLAY OF TRACKS OF 10 ANIMALS COMMON TO YOUR AREA, LABEL AT LEAST 3 WITH THE ANIMAL S COMMON NAME.

WITH THE SEEDS, THEY MAY CATEGORIZE THEM ACCORDING TO THEIR MODE OF TRAVEL - WIND, ANIMALS, PROPULSION.

494. THE SUNDAY AFTERNOON DRIVE REVISITED. ON RETURN FROM CAMP, PLAN WITH THE CHILDREN WAYS TO DEMONSTRATE CAMPING EXPERIENCES WITH THEIR FAMILY. ON A MAP OF THE AREA, LOCATE THE NEARBY PARKS, RECREATION AREAS, CAMPSITES, HIKING TRAILS, BIRD SANCTUARIES, ETC. IDENTIFY WITH THE CHILDREN THREE TO FOUR SKILLS WHICH THEY COULD EASILY DEMONSTRATE ON AN AFTERNOON TRIP. SOME THINGS MIGHT BE HOW TO BUILD A FIRE, COOKING AT CAMP, IDENTIFICATION OF PLANTS OR ANIMALS, CONSTRUCTING A SIMPLE TOOL, A SAFETY PRACTICE IN HIKING OR A CONSERVATION LAW OR BEHAVIOR TO PRACTICE. HAVE THE CHILDREN ENCOURAGE A FAMILY OUTING TO EXPLORE AN AREA WITH THEMSELVES AS TRIP GUIDE.

502. NATURE CARD FLASH. PREPARE A SET OF PICTURES MOUNTED ON TAG BOARD WHICH ILLUSTRATES A PHASE OF CAMP CRAFT, NATURE, OR CONSERVATION. FLASH A PICTURE TO A SMALL GROUP OR AN INDIVIDUAL FOR A BRIEF PERIOD BETWEEN 5-10 SECONDS AND REMOVE IT. HAVE THE GROUP OR INDIVIDUAL DESCRIBE IT CORRECTLY. AFTER THE CHILDREN HAVE COMPLETED THEIR DESCRIPTION, SHOW THEM THE PICTURE AGAIN AND HAVE THEM RECOGNIZE THINGS THEY MISSED AND HAVE THEM CORRECT ERRONEOUS IMPRESSIONS.

505. THE CHILD CORRECTLY ARRANGES A PICTURE FAMILIAR BIRDS, ANIMALS, OR FLOWERS WHICH HAS BEEN CUT INTO 3 OR MORE PIECES. SOMETIMES THE CHILD MUST SEE A DUPLICATE OF THE WHOLE PICTURE TO REFER TO INITIALLY.

506. THE TEACHER LINES UP A SERIES OF NATURE OBJECTS OR PICTURES ON A TABLE. CHILDREN LOOK CAREFULLY AT THEM. THEN WHILE A CHILD CLOSES HIS EYES, THE TEACHER OR ANOTHER CHILD CHANGES THE ORDER OF ONE OR MORE OF THE OBJECTS. THE CHILD MUST REPLACE IT IN CORRECT ORDER. VARIATION - GIVEN A NUMBER OF OUTDOOR OR NATURE OBJECTS, THE TEACHER DESCRIBES THE USE WHICH MAY BE MADE OF AN OBJECT. THE CHILD NAMES THE OBJECT. SOME CHILDREN MAY HAVE TO POINT TO IDENTIFY THE OBJECT, BUT SHOULD BE ENCOURAGED TO ALSO NAME IT.

507. PLACE FOUR FAMILIAR CAMP TOOLS OR NATURE OBJECTS ON A TABLE. THE CHILD CLOSES HIS EYES WHILE TEACHER REMOVES ONE OBJECT. THE CHILD LOOKS AT THE OBJECTS AND TELLS WHAT IS MISSING. HAVING THE CHILD NAME THE OBJECTS PRIOR TO THE GAME MAY HELP HIM REMEMBER THEM. GRADUALLY INCREASE THE NUMBER OF OBJECTS. WITH 6 OR MORE ITEMS THE CHILD MAY BE ABLE TO ASSOCIATE THEM IN PAIRS OR THREES. VARIATIONS OF THIS COULD BE A SELECTION OF RANDOM OBJECTS, AND A DISCUSSION OF HOW ONE COULD ARRANGE OR CLASSIFY THEM. CLASSIFICATION CRITERIA MUST BE POINTED OUT TO CHILDREN, FOR EXAMPLE, SHAPE, COLOR, FUNCTION, MATERIAL, SIZE. USE ONLY ONE CRITERION AT A TIME.

509. IN THE CLASSROOM AND AT THE CAMPSITE OR PLAYGROUND, THE TEACHER PRINTS LABELS AND ATTACHES THEM TO FAMILIAR OBJECTS, TOOLS, TREES, EQUIPMENT. THE CHILD IS GIVEN A SET OF LABELS TO MATCH THOSE PLACED ON OBJECTS. BEGIN WITH TWO VERY DIFFERENT LOOKING WORDS AND GRADUALLY INCREASE IN NUMBER. LATER THE CHILD MAY PRINT HIS OWN LABELS AND MATCH THESE TO THE OBJECTS FROM WHICH THE TEACHER HAS PREVIOUSLY REMOVED ALL LABELS.

INDIVIDUAL MATERIALS

55. REALIA. ROPE. GOLD LINE AVAILABLE THROUGH SPORTING GOODS STORE. APPROXIMATE PRICE - 1/4 INCH - 8 PER FT., 1/16 INCH - 20 PER FT. 1/4 INCH IS NECESSARY FOR MAKING SLINGS. 1/16 INCH IS NECESSARY FOR CLIMBING, REPELLING.
NYLON ROPE IS MUCH BETTER FOR CLIMBING SINCE IT HAS GREATER RESILIANCY.

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - THOMAS G.

OBJ. 2

2. TO DEMONSTRATE THE NECESSARY SAFETY ASPECTS OF OUTDOOR ACTIVITY.

INDIVIDUAL ACTIVITIES

252. SURVIVAL CRAFTS. MAKE ESKIMO GOGGLES. CUT OUT SOME BIRCHBARK TO FIT OVER EYES. USE ONLY BARK WHICH HAS FALLEN OFF TREE. WITH POCKET-KNIFE OR RAZOR, CUT NARROW SLITS FOR EYES. PUNCH HOLES IN SIDES AND USE STRING TO TIE ON GLASS.

436. FOIL COOKING. IN APPROXIMATELY ONE SQUARE FOOT OF TIN FOIL, PLACE A HAMBURGER PATTY, 1 POTATO, PEELED AND CUT INTO QUARTERS, 1 CARROT AND A SMALL ONION. ADD SALT AND PEPPER, ABOUT 1 TABLESPOON OF BUTTER AND A SMALL AMOUNT OF WATER. WRAP FOIL CAREFULLY AND PINCH EDGES TIGHTLY SO NO MOISTURE ESCAPES. FOIL PACKAGE MAY BE HELD IN ANY DIRECTION WITHOUT LEAKING. PLACE IN COALS AND COOK ABOUT 45 MINUTES OR UNTIL POTATOES ARE TENDER. TURN FOIL PACKAGES WITH GLOVES RATHER THAT PUNCTURING WITH A FORK. EACH CHILD MAY PREPARE HIS OWN MEAL IN THIS WAY.

494. THE SUNDAY AFTERNOON DRIVE REVISITED. ON RETURN FROM CAMP, PLAN WITH THE CHILDREN WAYS TO DEMONSTRATE CAMPING EXPERIENCES WITH THEIR FAMILY. ON A MAP OF THE AREA, LOCATE THE NEARBY PARKS, RECREATION AREAS, CAMPSITES, HIKING TRAILS, BIRD SANCTUARIES, ETC. IDENTIFY WITH THE CHILDREN THREE TO FOUR SKILLS WHICH THEY COULD EASILY DEMONSTRATE ON AN AFTERNOON TRIP. SOME THINGS MIGHT BE HOW TO BUILD A FIRE, COOKING AT CAMP, IDENTIFICATION OF PLANTS OR ANIMALS, CONSTRUCTING A SIMPLE TOOL, A SAFETY PRACTICE IN HIKING OR A CONSERVATION LAW OR BEHAVIOR TO PRACTICE. HAVE THE CHILDREN ENCOURAGE A FAMILY OUTING TO EXPLORE AN AREA WITH THEMSELVES AS TRIP GUIDE.

524. CHILDREN, WITH THE HELP OF THE TEACHER, SELECT AND PREPARE A GREEN STICK FOR COOKING OVER A CAMPFIRE. STICKS SHOULD BE STRAIGHT AND ABOUT 24 LONG. SMALL TWIGS SHOULD BE REMOVED FROM THE SIDES OF THE STICK. CHILDREN THEN PUT MARSHMALLOWS ON THE STICKS AND COOK OVER COALS. IT WILL BE EVIDENT THAT STICK COOKING TAKES PATIENCE AND SOME COORDINATION.

INDIVIDUAL MATERIALS

31. REALIA. INSECT REPELLANT. CUTTERS AVAILABLE THROUGH SPORTING GOODS STORES. APPROXIMATE PRICE - $1.50 PER BOTTLE.
CUTTERS IS THE MOST EXPENSIVE BUT ALSO THE MOST EFFECTIVE. THIS IS ONE AREA WHERE IT PAYS TO SPEND A LITTLE MORE.

38. REALIA. PARKA. DOWN AVAILABLE THROUGH SPORTING GOODS STORE. APPROXIMATE PRICE - $20.00 TO $150.00.
DOWN AS THE BEST INSULATOR PROVIDES FOR THE MOST HEAT RETENTION. IN COLD WEATHER IT CAN T BE BEAT.

39. REALIA. PARKA. POLYESTER-FILL AVAILABLE THROUGH DEPARTMENT STORES. APPROXIMATE PRICE - $10.00 TO $40.00 DEPENDING ON NAME BRAND. THESE SKI JACKETS ARE NECESSARY FOR COLDER WEATHER. THEY SHOULD BE LIGHTWEIGHT AND EASY TO CARRY. THEY DO PROVIDE GOOD PROTECTION FROM THE WIND AND COLD.

47. REALIA. HIKING BOOTS. VOYAGEUR, DUNHAM - ANY BOOT WITH VIBRAM

SOLES. AVAILABLE AT MOST OUTDOOR STORES. APPROXIMATE PRICE - $20.00. THESE BOOTS SHOULD BE LIGHTWEIGHT BUT STURDY. VIBRAM SOLES ARE THE BEST BECAUSE THEY HAVE THE BEST MATERIAL FOR GRIPPING SURFACES.

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62. RACK SACK. AVAILABLE THROUGH SPORTING GOODS STORES, RECREATION CENTER FOR LOAN OR MANUFACTURER FOR GROSS BASE PRICE PURCHASE. THIS IS A EUROPEAN TYPE BAG. IT IS CHEAPER THAN A FRAME PACK USUALLY . THEY FEATURE A LOW CENTER OF GRAVITY AND ARE ABLE TO WITHSTAND ROUGH TREATMENT. THEY ARE BEST SUITED FOR CROSS COUNTRY SKIING AND ROCK CLIMBING.

INDIVIDUAL MEASURING DEVICES

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - THOMAS G.

OBJ. 20

20. TO DISCRIMINATE BETWEEN SOCIALLY ACCEPTABLE AND UNACCEPTABLE BEHAVIOR IN VARYING ENVIRONMENTS.

INDIVIDUAL ACTIVITIES

64. FIND A FIELD OF TALL GRASS. CHILDREN SELECT LOCATIONS AT 25 - 50 FT. FROM EACH OTHER. AT A SIGNAL EVERYONE CRAWLS TO THE CENTER OF FIELD. MAKE UP ANIMAL CALLS FOR EACH INDIVIDUAL SO PEOPLE CAN KEEP TRACK. CRAWL BACK TO START BY FOLLOWING PREVIOUS PATH.

367. BEHAVIOR MOD. TO CONTROL FIGHTING OR OUTBURSTS IN TEMPER, CHALLENGE THE CHILD TO A RACE AROUND THE CAMP, OR TO SAWING WOOD, OR TO COUNTING TO 100 IN HIS LOUDEST VOICE. AL OW FOR AN ALTERNATIVE TO THIS ENERGY.

524. CHILDREN, WITH THE HELP OF THE TEACHER, SELECT AND PREPARE A GREEN STICK FOR COOKING OVER A CAMPFIRE. STICKS SHOULD BE STRAIGHT AND ABOUT 24 LONG. SMALL TWIGS SHOULD BE REMOVED FROM THE SIDES OF THE STICK. CHILDREN THEN PUT MARSHMALLOWS ON THE STICKS AND COOK OVER COALS. IT WILL BE EVIDENT THAT STICK COOKING TAKES PATIENCE AND SOME COORDINATION.

INDIVIDUAL MATERIALS

INDIVIDUAL MEASURING DEVICES

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - CLAIRANN L.

OBJ. - 2

2. TO DEMONSTRATE THE NECESSARY SAFETY ASPECTS OF OUTDOOR ACTIVITY.

INDIVIDUAL ACTIVITIES

143. EXTINGUSH THE FIRE WHEN YOU DON T NEED IT. SPRINKLE WATER ON THE EMBERS AND STIR THE EMBERS WITH A STICK AND SPRINKLE AGAIN. WET THE AREA OR WORK THE DIRT INTO THE ASHES UNTIL THE FIRE IS DEAD. BURY THE ASHES AND LEAVE SITE AS IT WAS FOUND.

144. DECIDE WHAT TYPE OF FIRE SUITS YOUR NEEDS AND BUILD TO THOSE NEEDS. A TEEPEE FIRE LAY IS USED FOR BROILING AND FRYING IN POTS AND PANS. PLACE TINDER ON THE GROUND IN THE MIDDLE OF FIRE SITE. PUSH A STICK INTO THE GROUND SLANTING OVER THE TINDER AND THEN LEAN A CIRCLE OF KINDLING STICKS AGAINST THE SLANTING STICK LEAVING A SPACE TOWARD THE WINDWARD SIDE FOR DRAFT. LIGHT THE TINDER FIRST AND AFTER IT HAS CAUGHT THE KINLING FEED THE FIRE WITH FUEL, WORKING UP TO THICKER PIECES. BUILD THE FIRE TO THE SIZE YOU NEED.
A CRISSCROSS FIRE IS BEST WHEN COOKING WITHOUT POTS AND PANS. PLACE TINDER BETWEEN TWO THICK STICKS. ARRANGE KINDLING IN A CRISSCROSS PATTERN. MAKE 8 TO 10 LAYERS. LIGHT TINDER CLOSE TO THE GROUND. IF PROPERLY LAID THE FIRE WILL FLARE AND TURN QUICKLY INTO A BED OF EMBERS.

145. BUILD A FIRE ON A SPOT WHERE YOU CAN HAVE COMPLETE CONTROL AND THE DANGER OF SPREADING IS ABSENT. CLEAR THE GROUND DOWN TO MINERAL LEVEL IN A TEN INCH DIAMETER.

436. FOIL COOKING. IN APPROXIMATELY ONE SQUARE FOOT OF TIN FOIL, PLACE A HAMBURGER PATTY, 1 POTATO, PEELED AND CUT INTO QUARTERS, 1 CARROT AND A SMALL ONION. ADD SALT AND PEPPER, ABOUT 1 TABLESPOON OF BUTTER AND A SMALL AMOUNT OF WATER. WRAP FOIL CAREFULLY AND PINCH EDGES TIGHTLY SO NO MOISTURE ESCAPES. FOIL PACKAGE MAY BE HELD IN ANY DIRECTION WITHOUT LEAKING. PLACE IN COALS AND COOK ABOUT 45 MINUTES OR UNTIL POTATOES ARE TENDER. TURN FOIL PACKAGES WITH GLOVES RATHER THAT PUNCTURING WITH A FORK. EACH CHILD MAY PREPARE HIS OWN MEAL IN THIS WAY.

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UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - CLAIRANN L.

OBJ. 15

15. TO CREATE TOOLS USING MATERIALS FOUND IN OUT-OF-DOORS.

INDIVIDUAL ACTIVITIES

68. INDIAN POTTERY. USE CLAY FROM PONDS. MOLD CUPS, BOWLS, MARBLES, ETC ALLOW TO DRY. FIRE DIRECTLY IN COALS.

70. WEAVE BASKETS AND MATS FROM DRY CATTAILS. SOAK CATTAILS IN WATER TO MAKE THEM MORE PLIABLE.

74. TAKE A QUART OF WATER, A POUND OF SUGAR, A LARGE PAN. COLLECT WILD EDIBLE BERRIES, APPLES, GRAPES, COOK OVER OPEN FIRE. STIR WITH CLEAN STICK. ADD WATER AND SUGAR AS DESIRED. BERRIES WILL JELL, APPLES MAKE A MUSHY SAUCE. SERVE ON BROAD LEAVES SUCH AS GRAPE LEAVES.

132. SNOW SCULPTURING. SEVERAL CHILDREN WORK TOGETHER IN COLLECTING SNOW AND CREATING THEIR OBJECT. AN ANIMAL, PERSON, CARTOON, CHARACTER, ETC., MAKE INTERESTING SCULPTURES. FOOD COLORING CAN BE USED TO COLOR FEATURES OF THE CHARACTER.

164. GATHER DRY WOOD OFF THE GROUND OR LOW, DEAD BRANCHES OF TREES FOR THE WOOD PILE. THEN SORT THE WOOD INTO THREE TYPES TINDER, TINY STICKS TO START BURNING FROM THE FIRST FLAME OF THE MATCH OR SPARK FROM FLINT KINDLING, LONG NARROW STICKS, NO THINKER THAN THUMB, TO MAKE FIRE LARGER , AND FUEL, THICK STICKS TO KEEP THE FIRE BURNING.

175. GATHER SEVERAL PEBBLES AND SEE HOW MANY DIFFERENT CREATURES YOU CAN MAKE. WHEN SATISFIED WITH ONE, GLUE IT TOGETHER WITH QUICK DRYING LIQUID GLUE.

177. FIND TWIGS THAT LOOK LIKE VARIOUS ANIMALS OR CREATURES. GATHER OTHER NATURAL MATERIALS TO COMPLETE THE CREATURE. USE GLUE OR CARVE HOLES.

INDIVIDUAL MATERIALS

INDIVIDUAL MEASURING DEVICES

89. INCORPORATE LITTLE TESTS OR STRESS SITUATIONS IN YOUR OUTDOOR ACTIVITY SUCH AS FORGETTING A SPATULA, OR BEING FAR AWAY FROM A DRINKING SUPPLY OR FORGETTING THE TENT POLES. NOTE HOW CHILDREN COMPENSATE OR SOLVE SITUATIONS. DISCUSS SOLUTIONS AFTER THE EVENT.

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INDIVIDUAL MEASURING DEVICES

UNIT TITLE - IT AS IN TC BE OUT

STUDENT NAME - KATHLEEN F.

OBJ. 7

7. TO DETERMINE NECESSARY CLOTHING FOR PARTICULAR ACTIVITIES AND SEASON.

INDIVIDUAL ACTIVITIES

26. GIVEN A BUDGET OF $100.00, SELECT ALL THE NECESSARY EQUIPMENT FOR A WILDERNESS CAMP FROM A MAIL ORDER CATALOGUE. CAMP SHOULD BE PRE-DETERMINED AS TO GEOGRAPHY, SEASON, CLIMATE, ETC..

28. GIVEN A LIST OF ASSORTED CLOTHES, LABEL EACH ITEM AS TO SUMMER OR WINTER USE.

29. BRING IN A DUFFLE BAG OR BAG USED TO CARRY CLOTHES FOR AN OUTDOOR ACTIVITY AND ASSORTED CLOTHES - SWEATER, SWIMMING TRUNKS, SNEAKERS, MITTENS, SNOWPANTS, ETC.. HAVE CHILDREN PACK BAG FOR A SUMMER PICNIC, A WINTER CAMPOUT, A SPRING HIKE OR SOME OTHER SPECIFIC ACTIVITY.

88. INVESTIGATE WINTER ENVIRONMENTS. INCLUDE -
- AIR TEMPERATURE
- SOIL TEMPERATURE
- SURFACE TEMPERATURE
- WIND DIRECTION
- WIND VELOCITY
- HUMIDITY
- LIGHT INTENSITY

RELATE YOUR FINDINGS TO OUTDOOR LIVING.

99. WINTER - OBSERVATION OF FREEZING WATER. HAVE THE CHILDREN BRING IN SMALL CONTAINERS OF A VARIETY OF SHAPES AND MATERIALS. FILL WITH WATER AND PLACE OUTSIDE IN COLD WEATHER SO THAT THE LIQUID WILL FREEZE OBSERVE THE FREEZING PROCESS NOTING WHERE THE CRYSTALS FORM FIRST AND WHICH CONTAINERS BEGIN TO FREEZE FIRST. NOW PLACE TIGHT COVERS ON THE CONTAINER AND LEAVE OUT TO FREEZE OVERNIGHT. THE FOLLOWING MORNING LET THE CHILDREN DRAW CONCLUSIONS ON WHAT HAPPENED. DISCUSS THE POWER OF FREEZING WATER ON PIPES, ROCKS, ETC..

127. WINTER ACTIVITIES - SNOWSHOEING. WHEN SNOW IS PRESENT, TAKE THE CHILDREN SNOWSHOEING. LET THEM GET IN STEP BY CALLING LEFT RIGHT . RESEARCH THE HISTORY AND USE OF SNOW SHOES.

173. SIGNS OF THE SEASON HIKES. GO ON HIKES DURING THE VARIOUS SEASONS. WHAT SIGNS OF THE SEASON DO YOU SEE AND HEAR.

224. USING A MALE OR FEMALE FORM, DRESS THE FIGURE ACCORDING TO WEATHER AND ACTIVITY.

267. EXPERIMENT. HOW LIGHT ON CERTAIN COLORS PRODUCES HEAT.
MATERIALS - ICE CUBES OR ICE FROM OUTSIDE , 2 SMALL BOWLS OF THE SAME SIZE AND COLOR, 2 PIECES OF CLOTH LARGE ENOUGH TO COVER THE BOWLS AND ABOUT THE SAME SIZE ONE BLACK AND ONE WHITE .
- PUT SAME AMOUNT OF ICE IN EACH BOWL
- COVER EACH BOWL
- PUT BOWLS IN SUN SIDE BY SIDE
- AFTER 30 MINUTES REMOVE CLOTH.
- COMPARE MELTING CUBES IN BOTH BOWLS
- WHICH CLOTH MAKES THE ICE MELT FASTER.

120

306. USE A CAMERA TO TAKE PICTURES OF CLOUDS. IDENTIFY EACH CLOUD AND RECORD THE WEATHER IT BROUGHT.

317. WASHING CLOTHES -
- RINSE OUT CLOTHES IN A PAIL OF WATER. WRING CLOTHES BETWEEN TWO PEOPLE IF IT IS LARGE.
- DRAIN WATER AWAY FROM BODIES OF WATER. THROW WATER INTO THICK VEGETATATION.
- IF SOAP IS NEEDED PUT A LITTLE IN BIG KETTLE OF WATER. HEAT CLOTHES IN WATER. BE CAREFUL OF DYES RUNNING. RINSE CLOTHES IN COOL WATER AND WRING.
- CLOTHES CAN BE SPREAD ON ROCKS OR OVER BRANCHES TO DRY. TURN CLOTHES OVER, AND INSIDE OUT UNTIL DRY. ALLOW THE CLOTHES TO DRY FOR A DAY. CLOTHES WILL GET WET IF LEFT OUT OVERNIGHT. CONSIDER POSSIBLE RAIN.
- BE CAREFUL OF WOOLS AND DELICATE MATERIALS.

494. THE SUNDAY AFTERNOON DRIVE REVISITED. ON RETURN FROM CAMP, PLAN WITH THE CHILDREN WAYS TO DEMONSTRATE CAMPING EXPERIENCES WITH THEIR FAMILY. ON A MAP OF THE AREA, LOCATE THE NEARBY PARKS, RECREATION AREAS, CAMPSITES, HIKING TRAILS, BIRD SANCTUARIES, ETC. IDENTIFY WITH THE CHILDREN THREE TO FOUR SKILLS WHICH THEY COULD EASILY DEMONSTRATE ON AN AFTERNOON TRIP. SOME THINGS MIGHT BE HOW TO BUILD A FIRE, COOKING AT CAMP, IDENTIFICATION OF PLANTS OR ANIMALS, CONSTRUCTING A SIMPLE TOOL, A SAFETY PRACTICE IN HIKING OR A CONSERVATION LAW OR BEHAVIOR TO PRACTICE. HAVE THE CHILDREN ENCOURAGE A FAMILY OUTING TO EXPLORE AN AREA WITH THEMSELVES AS TRIP GUIDE.

511. CHILDREN MAY BRING DOLLS OR GI JOE S TO SCHOOL AND DRESS THEM ACCORDING TO AN OUTDOOR ACTIVITY. CHILDREN MAY DESIGN AND MAKE CLOTHING AND EQUIPMENT WHICH IS NECESSARY AND APPROPRIATE TO A CERTAIN ACTIVITY. CHILDREN MAY USE SCRAPS OF MATERIALS FOR CLOTHING. EQUIPMENT SUCH AS AN AXE OR BINOCULARS MAY BE MADE FROM CARDBOARD, PAPER AND TINFOIL. THE DOLLS MAY THEN BE USED TO ROLE PLAY PROPER BEHAVIOR IN OURDOOR ACTIVITIES.

530. READ JACK LONDON S SHORT STORY TO BUILD A FIRE TO THE CLASS. AFTER THE ENTIRE STORY HAS BEEN READ AND EXPLAINED AS AN ADVENTURE ABOUT A MAN FOOLISHLY ALONE IN THE ARCTIC, LIST ERRORS THE MAN MADE AS A TRAVELER WITH HIS DOG IN 90 DEGREE BELOW ZERO WEATHER. RE-READ THE SECTION STRESSING THE MAN S ATTEMPT TO BUILD A FIRE AND CONTRAST HIS MISTAKES BY DESCRIBING PROPER METHODS FOR BUILDING A FIRE. MAKE A LIST OF PROPER FIRE BUILDING TECHNIQUES AS THEY PERTAIN TO SITE SELECTION, NEEDED BURNABLE MATERIALS, SAFETY FACTORS AND WEATHER CONDITIONS.

532. STUDENTS WILL PREPARE A SOFT MATTRESS UPON WHICH TO PLACE THEIR SLEEPING BAGS. THE GROUND SHOULD BE LEVEL AND CLEARED OF ALL TWIGS AND ROCKS. THE AREA MAY THEN BE PADDED WITH DRIED, FALLEN THIN HEMLOCK BRANCHES AND PINE NEEDLES. IN AREAS WHERE BOTH MATERIALS ARE NOT PRESENT, USE ONE OF THE MATERIALS. PLACE WATER PROOF MATERIAL OVER THE PADDED AREA AND PLACE SLEEPING BAG ON TOP.

INDIVIDUAL MATERIALS

2. BOOK. MASON, BERNARD S. THE JUNIOR BOOK OF CAMPING AND WOOD CRAFT. THE RONALD PRESS CO. NEW YORK, NY 10010. 1943. LARGE HARDCOVER. MANY PICTURES AND DIAGRAMS. EXCELLENT SECTION ON SHELTER CONSTRUCTION AND MAKING COOKING UTENSILS.

4. BOOK. COLBY, C. B. FIRST CAMPING TRIP. COWARD-MC CANN, INC. NEW YORK, NY 1955.
RESOURCE BOOK. DRAWINGS WITH CAPTIONS. COVERS ALL SKILLS OF WILDERNESS CAMPING.

7. BOOK. LINDHOLM, LT. COLONEL MAUNO A. GUIDE FOR YOUNG CAMPERS. HART PUBLISHING CO. NEW YORK, NY. 1961. $3.95.
A WELL ILLUSTRATED STEP BY STEP GUIDE TO CAMPING. INCLUDES CHECK LISTS FOR PLANNING OUTDOOR ACTIVITIES. COVERED IN BOOK IS - CLOTHES FOR CAMPING, SHELTERS, FOIL COOKERY, WIRE CRAFT, TREE IDENTIFICATION, SANITATION, TRAIL MARKS, BEDDING DOWN, AND WOODCRAFT.

10. BOOK. YOUNGPETER, JOHN M. WINTER SCIENCE ACTIVITIES. HOLIDAY HOUSE, INC. NEW YORK, NY 10022. $2.95.
THIS BOOK OPENS UP AN OFTEN FORGOTTEN FIELD OF STUDY. NATURE STUDY IN THE WINTER. AREAS OF STUDY INCLUDE - ANIMALS, WINTER PLANTS, WEATHER, WATER, ICE, SNOW, AND WINTER AND THE STARS. INCLUDES ABOUT ONE HUNDRED PRACTICAL AND USEFUL ACTIVITES FOR CLASS AND INDEPENDENT USE.

32. REALIA. RAIN PONCHO. AVAILABLE THROUGH SPORTING GOODS STORE OR DEPARTMENT STORES. APPROXIMATE PRICE - $1.00 OR $2.00.
MAKE SURE THE ONES YOU BUY ARE CHEAP AND LIGHT. CHILDREN HAVE A HABIT OF RIPPING THEM. HOWEVER, THEY RE PRICELESS WHEN IT STARTS TO RAIN.

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68. RESOURCE. NEW YORK STATE CONSERVATION DEPARTMENT, ALBANY, NY 12201.
CONTACT DIVISIONS IF LANDS AND FORESTS, FISH AND GAME, CONSERVATION EDUCATION, PARKS.
NEW YORK HAS AN EXCELLENT CONSERVATION DEPARTMENT. THEY CAN PROVIDE SPEAKERS, CAMPSITES, AND INFORMATION ON WHERE TO GO TO ACCOMPLISH A SPECIFIC OBJECTIVE. THEY WILL ALSO FURNISH AND WORK WITH YOU IN ENCOURAGING CONSERVATION PROJECTS.

72. BOOK. BAKER, ELIZABETH. TAMMY CAMPS IN THE ROCKY MOUNTAINS. HOUGHTON MIFFLIN CO. BOSTON. 59 PGS. $2.95.
TAMMY S INTEREST IN PHOTOGRAPHY GETS HER INTO A PREDICAMENT. CLIMBING AND CAMPING ADVENTURES ARE ESSENTIALS IN THE STORY.

75. BOOK. JAEGER, ELLSWORTH. WILDWOOD WISDOM. MACMILLEN CO. $6.95
THIS BOOK IN SOME CIRCLES IS CONSIDERED A STANDARD FOR CAMPERS. IT DOES PROVIDE A WEALTH OF INFORMATION AND CAN PROVIDE ON THE SPOT REFERENCES.

78. BOOK. MACFARLAN. THE BOY S BOOK OF OUTDOOR DISCOVERY. STACKPOLE BOOKS. HARRISBURG, PA. 17105. $4.50.

ACTIVITIES FOR LEARNING CAMP SKILLS. CHAPTERS 1 - 6 AND 9 HELPFUL. SIMPLE EXERCISES IN ORIENTATION, AND NATURE STUDIES WHICH CHILDREN CAN DO INDEPENDENTLY.

86. BOOK. MACFARLAN, ALLEN A. THE BOY S BOOK OF BACKYARD CAMPING. STACKPOLE BOOKS. HARRISBURG, PA. 17105. 1968. $4.50.
THIS IS A THOROUGH, WELL-ORGANIZED RESOURCE BOOK FOR YOUNG BOYS AND TEACHERS. A WHOLE RANGE OF IDEAS ARE INCLUDED. COMPARING TENTS, FOOD PREPARATION, TAKING CARE OF EQUIPMENT, BASIC CAMPING SKILLS, GAMES, AND SAFETY RULES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
LARRY IS A SURVIVAL INSTRUCTOR OF THE HIGHEST ORDER. HE HAS A GREAT DEAL OF EXPERIENCE IN THE OUTDOO S. HE ACCEPTS NATURE FOR WHAT IT IS, AND WORKS WITH IT, NOT AGAINST IT.

91. BOOK. HAMMETT, CATHERINE T. YOUR OWN BOOK OF CAMPCRAFT. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. 1950. ABOUT $2.00.
A VERY GOOD GUIDE FOR YOUNG CAMPERS. STIMULATES INTERESTS. WELL WRITTEN. COVERS ALL PHASES OF CAMPING, INCLUDING CAMPING MANNERS.

92. BOOK. HOLDEN, JOHN L. THE YOUNG SPORTSMAN S GUIDE TO CAMPING. SIMON AND SCHUSTER, INC. NEW YORK, NY 10020. $1.00.
COVERS ALL FACETS OF CAMPING EXPERIENCE. GEARED TO YOUNG CAMPER. BASIC SKILLS FOR A GOOD CAMPING EXPERIENCE.

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ALL KINDS OF INFORMATION ON OUTDOOR EDUCATION - OBJECTIVES, ACTIVITIES, MATERIALS.

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THIS DIVISION CAN PROVIDE MATERIALS USEFUL IN PLANNING ACTIVITIES IN THE OUT-OF-DOORS.

111. BOOK. RIVIERE, WILLIAM. THE CAMPER S BIBLE. DOUBLEDAY AND CO. NEW YORK, NY 1970. $1.95.
THIS IS A VERY COMPREHANSIVE GUIDE, INCLUDING THE FOLLOWING TOPICS - TENTS AND HOW TO BUY THEM, CHOOSING A CAMPSITE, THE CAMPFIRE, COOKING STOVES, SLEEPING GEAR, PACKS AND PACKING, CLOTHES, USE OF MAP AND COMPASS, SAFETY, CANOES, AND WEATHER. IT ALSO LISTS PLACES TO WRITE FOR CAMPING INFORMATION.

112. BOOK. MACFARIAN, ALLAN A. THE BOY S BOOK OF HIKING. STACKPOLE BOOKS, HARRISBURG, PA 17105. $4.50.
A GOOD BOOK OF CAMPING BASICS - COCKING, DRESS, SAFETY, HEALTH, COMPASS WORK.

114. BOOK. MANDOLF, HENRY I. BASIC MOUNTAINEERING. 1050 MILLS TOWER 220 BUSH ST., SAN FRANSISCO, CALIF. 94104. $3.95.
BASIC SKILLS IN HIKING AND MOUNTAINEERING. EQUIPMENT, ALPINE CAMPING AND COOKING, ORIENTATION, WEATER, CLIMBING MISERIES AND FIRST AID, MOUNTAIN TRAVEL, ROCK CLIMBING, WINTER TRAVEL AND SNOW

CLIMBING. GLACIER TRAVEL, DESERT TRAVEL, RESCUE, AND RECOMMENDED LITERTURE.

115. BOOK. KEPHART, HORACE. CAMPING AND WOODCRAFT. THE MACMILLAN CO. RIVERSIDE, NY 08075. $6.95.
HAS MUCH PRACTICAL NATURE LORE. HAS INFORMATION WHICH IS AVAILABLE IN FEW OTHER PLACES. FIRST PRINTING - 1916. ALSO NOSTALGIC.

116. RESOURCE. AMERICAN CAMPING ASSOCIATION. MARTINSVILLE, INDIANA 46151
INFORMATION ABOUT CAMPING AND OUTDOOR ACTIVITIES - MAPS, CHARTS, EQUIPMENT, ACTIVITIES FOR OUT-OF-DOORS.

117. RESOURCE. AMERICAN ASSOCIATION FOR HEALTH, PHYSICAL EDUCATION AND RECREATION. COLLEGE OF EDUCATION, MICHIGAN STATE UNIVERSITY, EAST LANSING MICHIGAN 48823.
ALL SORTS OF INFORMATION - BOOKS, FILMS, RECORDS, ACTIVITIES DEALING WITH OUTDOOR EDUCATION.

123. BOOK. MCNALLY, TOM. CAMPING FOR BOYS AND GIRLS. FOLLETT PUBLISHING CO. CHICAGO, ILL. 1966.
A GOOD BOOK THAT DISCUSSES ALL ASPECTS OF CAMPING FROM EQUIPMENT TO SAFETY AND COURTESY. A SECTION IS DEVOTED TO WHERE AND HOW TO SET UP CAMP, CAMP COOKING AND CARE OF EQUIPMENT.

131. BOOK. WHELEN, COLONEL TOWNSEND AND ANGIER, BRADFORD. ON YOUR OWN IN THE WILDERNESS. STACKPOLE CO. HARRISBURG, PA 17105. 1958.
A GOOD CAMPING AND WOODCRAFT HANDBOOK COVERING WILDERNESS CAMPING. SECTIONS CONCERNING SHELTERS, EQUIPMENT, MAP READING, AND COOKING.

136. BOOK. ANGIER, BRADFORD. SKILLS FOR TAMING THE WILDS. STACKPOLE BOOKS. HARRISBURG, PA. 17105 1967. $6.95.
THIS IS AN EXCELLENT BOOK COVERING EVERY ASPECT OF A CAMPING EXPERIENCE. ANGIER DISCUSSES CLOTHING, BACKPACKING, FORECASTING THE WEATHER FROM NATURE, FIRES, SHELTERS, WAYS TO TRAVEL AND GATHERING AND PREPARING FOOD. USEFUL AS COMPLETE GUIDE.

165. BOOK. COLBY, C. B. SURVIVAL - TRAINING IN OUR ARMED FORCES. COWARD-MCCANN INC. 1965. $2.52.
MANY PICTURES. EXPLAINATION OF ARMY SURVIVAL TRAINING. EMPHASIZES BASIC NEEDS, AND PRIORITIES OF SURVIVAL.

176. RESOURCE PERSON. DONALDSON, GEORGE. HOW TO PLAN AND CONDUCT FIELD TRIPS. BOX 203. OREGON, ILLINOIS.

178. BOOK. TIPS AND TRICKS IN OUTDOOR EDUCATION. INTERSTATE PRINTERS PUBLISHERS.

INDIVIDUAL MEASURING DEVICES

17. HAVE SEVERAL CHILDREN PACK THEIR OWN PACK. MAKE SURE EACH HAS SUFFICIENT GEAR FOR ACTIVITY. HAVE CHILDREN FOLLOW A CHECK LIST FOR THIS. AFTER EACH HAS PACKED, HAVE A BLINDFOLDED CHILD TRY ON EACH PACK AND DECIDE WHICH IS THE MOST COMFORTABLE. HAVE EACH DISCUSS THEIR REASONS FOR PACKING, SUCH AS ACCESSIBILITY, WEIGHT DISTRIBUTION, NEATNESS.

68. MAKE A NOTE OF THOSE PEOPLE WHO DRESSED APPROPRIATELY FOR AN ACTIVITY AND ASK THEM WHY THEY STAYED COMFORTABLE.

69. MAKE A QUESTIONAIRE AFTER TWO OR MORE OUTDOOR ACTIVITIES AND ASK

CHILDREN -
- DID YOU NEED HELP PREPARING FOR THIS OUTING
- HOW LONG DID IT TAKE YOU TO GET READY
- DID YOU REMEMBER EVERYTHING

UNIT TITLE - IT IS IN TO BE OUT

STUDENT NAME - KATHLEEN F.

BEST COPY AVAILABLE

OBJ. 31

31. TO RESPOND TO EMERGENCIES IN A RATIONAL WAY.

INDIVIDUAL ACTIVITIES

69. COLLECT RAIN WATER FOR EMERGENCY USE.
- CONSTRUCT A POOL. USE CLEAN PLASTIC. MAKE SIDES BY DROPPING PLASTIC OVER A CIRCLE OF ROCKS, OR LOGS. SECURE EDGES.
- PUT OUT CLEAN CANS IN AN OPEN AREA.

247. DISCUSS THE CONTENTS NECESSARY FOR A POCKET-SIZED WILDERNESS SURVIVAL KIT. INCLUDED ITEMS MAY BE - BAND-AIDS, WATER PURIFICATION PILLS, POCKET KNIFE, ETC. COLLECT THE NAMED ITEMS IN A METAL BAND-AID CASE OR PLASTIC ENVELOPE.

252. SURVIVAL CRAFTS. MAKE ESKIMO GOGGLES. CUT OUT SOME BIRCHBARK TO FIT OVER EYES. USE ONLY BARK WHICH HAS FALLEN OFF TREE. WITH POCKET-KNIFE OR RAZOR, CUT NARROW SLITS FOR EYES. PUNCH HOLES IN SIDES AND USE STRING TO TIE ON GLASS.

256. TO ALLEVIATE THIRST OR DRY MOUTH, SUCK ON A CLEAN SMOOTH BUTTON, OR CLEAN SMOOTH PEBBLE.

259. GIVEN A DITTO WITH A LARGE OUTLINE OF A SNAKE, COLOR IN SNAKES ACCORDING TO PICTURE OF POISONOUS AND NON-POISONOUS SNAKES. LABEL EACH SNAKE. STAPE PICTURES TO MAKE A BOOK.

263. BEFORE GOING INTO AN UNFAMILIAR ENVIRONMENT, CHILDREN CAN MAKE UP A CODE OF WHISTLE SIGNALS. AGREE ON A DISTRESS SIGNAL, A RETURN TO MEETING PLACE, AND A WHISTLE TO IDENTIFY EACH INDIVIDUAL. PRACTICE WITH EACH SIGNAL. CARRY WHISTLES ON A STRING AROUND THE NECK. BLASTS ON A WHISTLE CARRY FARTHER THAN SHOUTS. LET CHILDREN BLOW THE WHISTLES FOR FIVE MINUTES WHEN THEY FIRST USE THEM. THEN STRESS THE SERIOUSNESS OF USING WHISTLES ONLY WHEN NECESSARY.

370. LEARN GROUND TO AIR MESSAGES. CONSULT SURVIVAL MANUALS FOR CODE.

371. EMERGENCY SIGNLAS. LEARN TO USE A MIRROR TO SIGNAL TO ANOTHER PARTY. FLASH MIRROR AND LISTEN FOR WHISTLE RESPONSES FROM THE OTHER GROUP. FIGURE OUT HOW TO POSITION MIRROR SO SIGNAL WILL BE SEEN.

372. ORIENTEERING BY THE MOON. THE FULL MOON IS ALWAYS 180 DEGREES FROM THE SUN. WHEN THE MOON IS A CRESCENT, THE CONVEX SIDE IS TOWARD THE SUN. FIGURE OUT DIRECTIONS FROM THIS INFORMATION.

373. ORIENTEERING. FIND THE NORTH STAR IN THE NIGHT SKY. WHEN YOU FACE POLARIS, EAST IS ON YOUR RIGHT, WEST IS ON YOUR LEFT.

405. TO CONSTRUCT A BOW USE A PIECE OF HARDWOOD, FREE FROM ANY CRACKS OR KNOTS. BE SURE THAT IT IS AT LEAST THE SIZE OF A MANS FIST. SCRAPE ONE SIDE FLAT AND USE THE ROUNDED SIDE AS THE BACK.

407. ATTACH HOOKS BY A TIGHT WRAPPING OF FINE STRING OR FIBER. FIRST SMEAR THE HOOK WITH PITCH THAN WRAP WITH FIBER AND SEAL AGAIN.

408. ANOTHER HOOK CAN BE MADE BY CUTTING A BONE INTO A RECTANGLE. NEXT DRILL THE BONE SEVERAL TIMES TO REMOVE THE CENTER PORTIONS. USE A

STONE TO SMOOTH THE INSIDE OUT. THIS SHOULD LEAVE A RECTANGULAR PERIMETER OF BONE. FINALLY CUT THE RING IN TWO OPPOSITE DIAGONAL PLACES. THIS CREATING TWO BONES.

409. FISHING HOOKS ARE BEST MADE FROM BONE. A SKEWER BONE IS A SLIVER TIED IN THE MIDDLE AND IS TWINED PARALLEL TO THE LINE AND INSERTED INTO THE BAIT. AFTER THE BAIT IS SWALLOWED THE BONE TURNS SIDEWAYS AND THE FISH IS HOOKED.

530. READ JACK LONDON S SHORT STORY TO BUILD A FIRE TO THE CLASS. AFTER THE ENTIRE STORY HAS BEEN READ AND EXPLAINED AS AN ADVENTURE ABOUT A MAN FOOLISHLY ALONE IN THE ARCTIC, LIST ERRORS THE MAN MADE AS A TRAVELER WITH HIS DOG IN 90 DEGREE BELOW ZERO WEATHER. RE-READ THE SECTION STRESSING THE MAN S ATTEMPT TO BUILD A FIRE AND CONTRAST HIS MISTAKES BY DESCRIBING PROPER METHODS FOR BUILDING A FIRE. MAKE A LIST OF PROPER FIRE BUILDING TECHNIQUES AS THEY PERTAIN TO SITE SELECTION, NEEDED BURNABLE MATERIALS, SAFETY FACTORS AND WEATHER CONDITIONS.

INDIVIDUAL MATERIALS

7. BOOK. LINDHOLM, LT. COLONEL MAUNO A. GUIDE FOR YOUNG CAMPERS. HART PUBLISHING CO. NEW YORK, NY. 1961. $3.95.
A WELL ILLUSTRATED STEP BY STEP GUIDE TO CAMPING. INCLUDES CHECK LISTS FOR PLANNING OUTDOOR ACTIVITIES. COVERED IN BOOK IS - CLOTHES FOR CAMPING, SHELTERS, FOIL COOKERY, WIRE CRAFT, TREE IDENTIFICATION, SANITATION, TRAIL MARKS, BEDDING DOWN, AND WOODCRAFT.

11. BOOK. COPELAND, HELEN. THIS SNAKE IS GOOD. THOMAS Y. CROWELL CO. NEW YORK, NY 1968. $3.95.
AN ADVENTURE STORY ABOUT A BOY WHO GOES CAMPING WITH HIS MAIN OBJECTIVE TO STUDY SNAKES. THE OTHER BOYS AND COUNSELORS ARE IGNORANT OF SNAKES AND DUCAN HAS QUITE AN ADVANTURE.

69. BOOK. BAKER, ELIZABETH. TAMMY CAMPS OUT. HOUGHTON MUFFLIN CO. $2.95.
STORY IS AN INTERESTING ONE FOR YOUNG CHILDREN. IT CONCERNS A YOUNG GIRL AND HER FIRST CAMPING EXPERIENCE. SHE LEARNS CERTAIN SKILLS WHICH SHE EVENTUALLY HAS TO PUT TO EMERGENCY USE.

75. BOOK. JAEGER, ELLSWORTH. WILDWOOD WISDOM. MACMILLEN CO. $6.95
THIS BOOK IN SOME CIRCLES IS CONSIDERED A STANDARD FOR CAMPERS. IT DOES PROVIDE A WEALTH OF INFORMATION AND CAN PROVIDE ON THE SPOT REFERENCES.

89. RESOURCE PERSON. LARRY MULLINS, DEPT. OF YOUTH LEADERSHIP, ROGERS BUILDING, BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH. FREE INFORMATION, BUT WOULD CHARGE FEE IF ASKED TO SPEAK.
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94. BOOK. GEORGE, JEAN. MY SIDE OF THE MOUNTAIN. E. P. DUTTON AND CO. NEW YORK, NY 10003. $3.00.
BEAUTIFUL. STORY ABOUT SAM GRIBLEY AND HIS EXPERIENCE IN THE

127

CATSKILL MOUNTAINS. HE RUNS AWAY, AND SETS UP HIS HOME, LIVING OFF THE LAND.

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INDIVIDUAL MEASURING DEVICES

42. THE CHILD SHOULD BE ABLE TO DISCUSS WHY HE IS AFRAID OF SOMETHING. FOR EXAMPLE - BEARS. HE SHOULD BE ABLE TO DISCUSS WHY ONE SHOULD AVOID BEARS AND WHAT ONE SHOULD DO IF CONFRONTED BY A BEAR. HE SHOULD BE ABLE TO VERBALIZE WHY BEARS COULD BE A REAL THREAT, AND HOW HE WOULD HANDLE THE SITUATION.

EVALUATION FORM COMPUTER BASED RESOURCE GUIDE

THE CONTINUED IMPROVEMENT OF COMPUTER BASED RESOURCE UNITS DEPENDS TO A GREAT EXTENT UPON YOUR ASSESSMENT OF THE PRINT-OUT YOU HAVE RECEIVED. YOUR RESPONSES TO THE FOLLOWING STATEMENTS SHOULD TAKE ONLY A FEW MINUTES TO COMPLETE. OF PARTICULAR CONCERN ARE YOUR WRITTEN RESPONSES WHICH ARE SOLICITED IN SEVERAL OF THE ITEMS.

TITLE OF UNIT USED----------

AVERAGE AGE OF CHILDREN IN CLASS----------

HAVE YOU PREVIOUSLY USED A COMPUTER BASED RESOURCE GUIDE YES---- NO----

THE CLASS CONSISTED OF PREDOMINATELY TYPICAL CHILDREN--- ATYPICAL CHILDREN----
IF ATYPICAL, PLEASE SPECIFY E.G. TRAINABLE M.R., PHYSICALLY HANDICAPPED .

PLEASE CIRCLE THE APPROPRIATE NUMBER.

	GREATLY	MODERATELY	VERY LITTLE	NOT AT ALL
1. THE COMPUTER BASED RESOURCE GUIDE AIDED ME IN PLANNING INSTRUCTIONS FOR THE STUDENTS I TEACH	4	3	2	1
2. THE USE OF THIS COMPUTER BASED RESOURCE GUIDE STIMULATED MY THINKING REGARDING NEW TECHNIQUES AND MATERIALS	4	3	2	1
3. TO WHAT EXTENT DID THE USE OF THE COMPUTER BASED RESOURCE GUIDE FACILITATE THE INDIVIDUALIZATION OF INSTRUCTION IN YOUR CLASSROOM	4	3	2	1
4. TO WHAT EXTENT DID YOUR STUDENTS REACT FAVORABLY TO THE USE OF THIS COMPUTER BASED RESOURCE GUIDE	4	3	2	1
5-10. INDICATE FOR EACH OF THE COMPONENTS LISTED BELOW ITS USEFULNESS IN PLANNING AND IMPLEMENTING INSTRUCTIONAL STRATEGIES FOR YOUR STUDENTS .				
A. OBJECTIVES	4	3	2	1
B. CONTENT	4	3	2	1

C. GROUP ACTIVITIES 4 3 2 1

D. INDIVIDUAL ACTIVITIES 4 3 2 1

E. MATERIALS 4 3 2 1

F. MEASURING DEVICES 4 3 2 1

11. DO YOU PLAN TO USE COMPUTER BASED RESOURCE GUIDES IN THE FUTURE
YES---- NO----

12. THE SECTION OF THE GUIDE MOST VALUABLE WAS TOTAL GROUP SUGGESTIONS----
INDIVIDUAL SUGGESTIONS---- NEITHER---- BOTH OF EQUAL VALUE----.

13. INDICATE THE NUMBER S OF ANY STATEMENTS YOU FOUND EXCEPTIONALLY HELPFUL
E.G. MATERIAL #136, ACTIVITY #17 .

14. INDICATE THE NUMBER S OF ANY STATEMENTS YOU FOUND TO BE TOTALLY
INAPPROPRIATE OR ERRONEOUS. PLEASE CLARIFY.

15. WHAT OTHER TOPICS WOULD YOU LIKE TO SEE IN THE FORM OF A COMPUTER BASED
RESOURCE UNIT

16. INDICATE ANY ADDITIONAL INFORMATION WHICH WE MIGHT FIND USEFUL IN IMPROVING COMPUTER BASED RESOURCE UNITS AND/OR ELABORATE ON ANY OF YOUR PREVIOUS ANSWERS. ALSO INDICATE ANY VALUABLE MATERIALS, ACTIVITIES, OR MEASURING DEVICES WHICH YOU UTILIZED WHICH WERE NOT IN THE GUIDE. PLEASE USE THE BACK OF THIS PAPER.

IF YOU WISH YOU MAY SIGN YOUR NAME

NAME ----------

ADDRESS ----------

DATE ----------

RETURN TO
STATE UNIVERSITY COLLEGE AT BUFFALO
RESEARCH AND DEVELOPMENT COMPLEX
1300 ELMWOOD AVENUE
BUFFALO, NEW YORK 14222
ATTENTION G. BIANCHI

RESOURCES AVAILABLE IN OUTDOOR EDUCATION

Herbert Foster

There are a number of resources, both public and private, available to schools interested in developing outdoor education programs. The following bibliography was discussed and participants had an opportunity to examine some of the publications suggested during this session.

AAAS - American Assoc. for the Advancement of Science - (published by Xerox) elementary school - K-6; best for grades K-3 for basic process skills; good for teacher with little science background; no texts for students.

Brown, Robert E. & Mouser, G. W., Techniques for Teaching Conservation Education, Burgess Publishing Co., Minneapolis, Minn., 1964, spiral-paperback.

Buchshaum, Ralph and Mildred, Basic Ecology, the Boxwood Press, Pittsburgh, Pa., 1957 paperback.

Chase, Craig C. & Shiner, J. W., Administrative Aids for Environmental Education, Recreation Dept., Slippery Rock State College, Pa., Fall 1971 paperback, free.

Comstock, Anna Botsford, Handbook of Nature Study, Comstock Publishing Asso., A Div. of Cornell Univ. Press, Ithaca, N.Y., 1939, 24th edition, hardcover.

ESS - Elementary Science Study - favorite of classroom and outdoor education teachers; grades K-8 - best for 4-6 - cover as much as you want, stop when kids not interested; student oriented - teacher never lectures; also supply or sell equipment - best microscope for kids - $3; 50 teachers guides on all different subjects - vary from $1 to $4 cash.

Golden Nature Guides - Birds . Glowers . Insects . Trees . Reptiles & Amphibians . Stars . Mammals . Seachores . Fishes . Fossils . Gamebirds . Spiders . Orchids . Zoo Animals . Seashells of the World . Rocks & Minerals . Butterflies & Moths . Non-Flowering Plants . Insects . Pond Life . Weeds, excellent for children to use. Good illustrations and easy to read, paperback, Golden Press, N.Y., 4X6, 1.00 - 1.50 Western Publishing Co., Inc.

Golden Science Guides, Zoology . Botany . Weather . Indian Arts, Golden or Golden Press, New York, Western Publishing Co., Inc., good for children, paperback 4X6 $1.95

Hammerman, Donald R. & Hammerman, William M., Teaching in the Outdoors, 2nd edition, Burgess Publishing Company, Minneapolis, Minn., 1973, paperback

Harlow, William M., Trees of the Eastern & Central U.S. & Canada, Dover Publications, Inc., New York, 1957, gives uses of trees and some history. Does not include shrubs, paperback 1.50.

Headstrom, Richard, Adventures With Insects, J.B. Lippincott Co., Philadelphia, Pa. & New York, 1963, hardcover.

Knapp, Clifford E., Outdoor Activities for Environmental Studies, The Instructor Publications, Inc., Dansville, N.Y. 14437, 1971, paperback.

Laun, H. Charles, The Natural History Guide, Alsace Books & Films, Alton, Ill., 1970, 2nd edition, paperback.

Michigan Dept. of Natural Resources, Environmental Education for Intermediate Grades, A Teacher's Manual, lists attitudes and understandings to develop, topics for discussion and suggested activities and references, free, I assume.

Musselman, Virginia W., Learning About Nature Through Crafts, Stackpole Books, Harrisburg, Pa., 1969, hardcover $3.95.

Musselman, Virginia W., (prepared for National Recreation & Park Asso. by V. Musselman), Learning About Nature Through Games, Stackpole Books, Harrisburg, Pa., 1967, hardcover $3.95.

National Audubon Society - Audubon Nature Bulletins and Audubon Aids - good information and teaching aids on all nature subjects; Educational Services, National Audubon Society, 950 Third Avenue, N.Y., N.Y. 10022, leaflets 10¢ - 50¢.

Resource Packet for Environmental Information & Education, State of N.Y., Dept. of Environmental Conservation, Albany, 12201. Reprints from the Conservationist, excellent teaching ideas, free.

SCIS - Science Curriculum Improvement Study - elementary level - K-6, non-text; biological and physical world.

Science Study Aids - Room 117, Center Bldg.; Agriculture Research Center; Educational Services Branch; Agriculture Research Service, USDA; Beltsville, Maryland 20705 - aids are free - only need to fill out suggestion card after trying out the aids.

Soil Conservation Service, An Outline for Teaching Conservation in Elementary Schools (PA-268), U.S. Dept. of Agriculture, Revised 7/1971, free, single copies.

Soil Conservation Service, Teaching Soil and Water Conservation, A Classroom and Field Guide (PA-341), U.S. Dept. of Agriculture, 1957 - revised 8/70, For N.Y.S.: State Conservationist, Soil Conservation Service, Midtown Plaza, Room 400, 700 East Water St., Syracuse, N.Y. 13210, free, single copies.

Staff, William B., Integrating Conservation & Outdoor Education Into The Curriculum (K-12), Burgess Publishing Co., Minneapolis, Minn., 1965, paperback.

Swan, Malcolm D., editor, Tips & Tricks in Outdoor Education, order from: The Interstate Printers & Publishers, Inc., Danville, Ill., 61832, 1970.

Watts, May Theilgaard, Master Tree Finder, Nature Study Guild Publishers, Box 972, Berkeley, Calif. 94701, 1963, paperback pocket manual 4X6, $1.

Watts, May Theilgaard & Watts, Tom, Winter Tree Finder, Nature Study Guild Publishers, Box 972, Berkeley, Calif. 94701, 1970, paperback, 75¢.

Wurman, Richard Saul, editor, Yellow Pages of Learning Resources, The MIT Press, Cambridge, Mass., 1972, good for community resource ideas, paperback.

INSTITUTE EVALUATION

Method: At the conclusion of the institute activities the participants were asked to complete a form indicating their reaction to the Institute workshop sessions. (Figure 1)

There were twenty-two evaluation forms returned. The results of the workshop evaluations, along with the comments recorded by the participants on the evaluation form are reported in this section. Each workshop session is treated and reported separately. In all cases, the data are treated in raw frequency counts (number of responses) and in percentages. The "no information" category accounts for participants not completing the evaluation form or, for one reason or another, did not attend a particular workshop session.

It should be noted that in the category Too Technical, an indication of disagreement is a favorable evaluation.

(Figure I)

Special Study Institute
on
Outdoor Education for the Handicapped

I. In the left hand column below are listed each of the workshop sessions presented during the institute. Opposite each workshop title are seven adjectives. Each adjective can take a value from 1 to 5. One (1) means that you strongly agree that the adjective describes that session, whereas five (5) indicates that you strongly disagree that the adjective describes the work session. For each work session listed, please indicate a value to each adjective.

Work session	Relevant	Stimulating	Well done	Valuable	Innovative	Productive	Too Technical
II Human Relations in the out of doors							
III Speaker James Gillette							
IVa Arts and Crafts							
IVb Nature & Science							
IVc Social Studies							
IVd Outdoor Games							
VI 1.)A look at Outdoor Education Programs							
2.)Available Resources							
3.)CBRU - It's In to Be Out							

II. A. The strongest points of the institute were:
1.
2.
3.

B. Those specific points most relevant to my area of concern (_____) were:
1.
2.
3.

C. If I were the coordinator of this institute, I would have changes the following:
1.
2.
3.

RESULTS:

KEY
= Frequency (number of responses)
% = Percent

(Figure 2) Frequency and Percentage Responses of the Workshop on Human Relations in the Out-of-Doors.

Work session	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
II Human Relations in the out-of-doors														
No Information	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5
Strongly Agree	18	81.8	19	86.4	16	72.7	18	81.8	11	50.0	14	63.6		
Agree	1	4.5	2	9.1	5	22.7	3	13.6	7	31.8	4	18.2		
Neutral	1	4.5							2	9.1	3	13.6		
Disagree	1	4.5							1	4.5			1	4.5
Strongly Disagree													20	90.9

Although there was disagreement concerning the relevancy and innovativeness of this workshop session (Fig. 2), it can be noted that over 81% of the participants indicate a favorable evaluation of this activity.

(Figure 3) Frequency and Percentage Responses of the Institute Keynote Speaker

III Speaker	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5	1	4.5
Strongly Agree	13	59.1	11	50.0	11	50.0	10	45.5	6	27.3	11	50.0	1	4.5
Agree	5	22.7	7	31.8	8	36.4	8	36.4	8	36.4	6	27.3	1	4.5
Neutral	3	13.6	3	13.6	1	4.5	3	13.6	7	31.8	2	9.1	4	18.2
Disagree					1	4.5					2	9.1	3	13.6
Strongly Disagree													12	54.5

When considering the speaker (Figure 3), the group had a very positive reaction. It is interesting to note, however, that while 31.8% were neutral regarding innovativeness, only 18.2% were neutral or disagreed that the speech was productive.

(Figure 4) Frequency and Percentage Responses of the Workshop on Arts and Crafts

IVa Arts and Crafts	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information	6	27.3	6	27.3	7	31.8	5	22.7	5	22.7	7	31.8	7	31.8
Strongly agree	11	50.0	8	36.4	10	45.5	10	45.5	10	45.5	11	50.0		
Agree	2	9.1	4	18.2	2	9.1	4	18.2	2	9.1	1	4.5	1	4.5
Neutral	1	4.5	3	13.6	2	9.1	1	4.5	2	9.1	2	9.1	1	4.5
Disagree	2	9.1	1	4.5	1	4.5	2	9.1	2	9.1	1	4.5		
Strongly Disagree									1	4.5			13	59.1

The Arts and Crafts workshop (Figure 4) received a favorable rating from over 50% of institute participants responding. It will be noted here that, compared to other sessions of the institute, this workshop session received a relatively high percentage of neutral and unfavorable responses.

(Figure 5) Frequency and Percentage Responses of the Workshop on Nature and Science

IVb Nature & Science	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information	3	13.6	3	13.6	3	13.6	3	13.6	3	13.6	3	13.6	3	13.6
Strongly Agree	15	68.2	13	59.1	11	50.0	13	59.1	10	45.5	14	63.6	1	4.5
Agree			2	9.1	5	22.7	3	13.6	5	22.7	4	18.2	1	4.5
Neutral	4	18.2	3	13.6	3	13.6	2	9.1	4	18.2	1	4.5	1	4.5
Disagree			1	4.5			1	4.5					2	9.1
Strongly Disagree													14	63.6

In general, the workshop on nature and science enjoyed a high percent of positive responses (fig. 5). Although there was a very small (4.5%) unfavorable response, there appears to be a high neutral reaction to the session.

(Figure 6) Frequency and Percentage Responses of the Workshop on Social Studies

1Vc Social Studies	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information	2	9.1	2	9.1	2	9.1	2	9.1	1	9.1	1	4.5	2	9.1
Strongly Agree	11	50.0	12	54.5	10	45.5	11	50.0	12	54.5	13	59.1	2	9.1
Agree	7	31.8	3	13.6	7	31.8	6	27.3	3	13.6	3	13.6	1	4.5
Neutral	2	9.1	5	22.7	2	9.1	3	13.6	5	22.7	4	18.2		
Disagree					1	4.5					1	4.5	3	13.6
Strongly Disagree													14	63.6

It can be noted that 13.6% of the participants responding to the workshop on social studies (Figure 6) indicated that the session was too technical, although, in all categories, between 67 and 81.8% of the responses are very favorable.

(Figure 7) Frequency and Percentage Responses of the Workshop on Outdoor Games

1Vd Outdoor Games	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information	1	4.5	1	4.5			1	4.5	1	4.5	1	4.5	1	4.5
Strongly agree	15	68.2	14	63.6	15	68.2	14	63.6	10	45.6	14	63.6	1	4.5
Agree	1	4.5	4	18.2	2	9.1	3	13.6	5	22.7	3	13.6		
Neutral	5	22.7	3	13.6	5	22.7	4	18.2	5	22.7	4	18.2	1	4.5
Disagree									1	4.5			3	13.6
Strongly Disagree													16	72.7

When responding to the workshop on outdoor games (Fig. 7) 72.7% or more rated the session very favorably. However, only 68.3% felt it was innovative.

(Figure 8) Frequency and Percentage Responses of the Workshop: A Look at Outdoor Education Programs

V1 1)A look at Outdoor Education Programs	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information			1	4.5	1	4.5			1	4.5			1	4.5
Strongly Agree	17	77.3	15	68.2	14	63.6	18	81.8	11	50.0	16	72.7		
Agree	3	13.6	4	18.2	3	13.6	4	18.2	6	27.3	3	13.6		
Neutral	2	9.1			3	13.6			2	9.1	2	9.1		
Disagree			1	4.5	1	4.5			1	4.5	1	4.5	3	13.6
Strongly Disagree			1	4.5					1	4.5			18	81.8

An unfavorable rating in the categories for stimulating and innovative was registered by 5% (Fig. 8) of the participants for the session: A Look at Outdoor Education Programs.

(Figure 9) Frequency and Percentage Responses of the Workshop on Available Resources

2)Available Resources	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information			1	4.5	1	4.5			1	4.5			1	4.5
Strongly Agree	20	90.9	18	81.8	17	77.3	19	86.4	14	63.6	18	81.8		
Agree	1	4.5	2	9.1	3	13.6	3	13.6	5	22.7	2	9.1	1	4.5
Neutral	1	4.5	1	4.5	1	4.5					2	9.1	3	13.6
Disagree									1	4.5			1	4.5
Strongly Disagree									1	4.5			16	72.7

Although the workshop session on Available Resources (Fig. 9) received an unfavorable evaluation from 9% of the participants responding, the workshop received a very favorable evaluation.

(Figure 10) Frequency and Percentage Responses of the Workshop on CBRU - It's In To Be Out

3) CBRU - It's In to Be Out	Relevant		Stimulating		Well done		Valuable		Innovative		Productive		Too Technical	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No Information														
No Information	1	4.5			1	4.5	1	4.5	1	4.5			1	4.5
Strongly Agree	20	90.9	21	95.5	19	86.4	20	90.9	20	90.9	21	95.5		
Agree			1	4.5	1	4.5	1	4.5	1	4.5	1	4.5		
Neutral	1	4.5			1	4.5							1	4.5
Disagree													2	9.1
Strongly Disagree													18	81.8

As noted in the frequency and percentage responses of the workshop on CBRU (Figure 10) the percentage of favorable responses was extremely high.

Conclusions:

A study of the data collected for each of the institute workshop sessions indicates that the overall response to the institute was very favorable and positive. A factor which could have influenced this response may have been the fact that the institute was held in an outdoor setting and the institute design provided for first-hand experiences for the participants.

The fact that the weather forced some of the workshop sessions undercover may account for some of the less than favorable responses and would imply that future institutes of this nature should provide for a number of alternate plans as Dr. Gillette suggested during his session.

It would seem that the results of the evaluation by the institute participants indicate that the format for this institute was well worth the time and effort on the part of the committee.

11. A. The strongest points of the Institute were:

Enthused and excited teachers.

Speakers.

Human relations.

Friendly attitudes of coordinators.

Our opportunity to share together for longer times and in closer relationships.

Down to earth.

Productive.

Helpful hints.

Help in individualizing programs.

Awareness of the activities that can be conducted in the out-of-doors.

Atmosphere and setting - the institute was "living Outdoor ed.".

Organization of activities.

Bringing together specialists in different areas of exceptionality.

Atmosphere of informality condusive to free exchange of ideas.

Emphasis on specific activities rather than generalizations.

The total participation and enthusiasm of the entire group.

Activities presented that are practical and enjoyable.

B. Those specific points most relevant to my area of concern (_____) were:

Discussion of school site utilization.

Methods of evaluation.

Developing a relevant program for handicapped children in outdoor education.

I feel as if all could be related to my class.

Available resources.

CBRU - help in developing a step by step program for my kids.

Exchanging ideas about benefits to emotionally disturbed children.

Getting information for teacher in-service program.

Using the outdoors to encourage social cooperation.

Developing concepts of trust in the "out-of-doors".

Simplicity of most activities.

Approaching academic skills through outdoor ed.

Improving social relations within a class through "blind walk", etc.

Possibilities of increasing motivation to learn and decreasing tension and fear which often block learning.

Adaptability of activities.

Adaptability of organization (food, arrangements).

C. If I were the coordinator of this institute, I would have changed the following:

Made it more school-site based.

Made special kids available for demonstration.

Had more practical ideas to use with students with specific problems.

Had more special ed. teachers giving firsthand experiences.

Made beginning, intermediate, and advanced skill groups.

Actual backpacking and hiking.

More problem solving activities to develop self-confidence and independence.

Slant material more towards particular problems of teaching special education.

Make it a winter camping trip.

Perhaps include a group of students.

I could'nt have done better-congratulations! and Thanks!

When I sat back and thought of how I would run it, it was slightly different as far as organization, etc., but this all worked out very well - I thoroughly enjoyed it. Thank you!

APPENDIX

In order to assist teachers in their outdoor education program planning, the forms used during this institute, along with menus and other pertinent information, have been included in this appendix.

APPENDIX I

SPECIAL STUDY INSTITUTE
on
OUTDOOR EDUCATION FOR THE HANDICAPPED

November 14, 15, 16, 1973

PRE-REGISTRATION FORM

I.
NAME_____ SOCIAL SECURITY NUMBER_____

ADDRESS_____ HOME PHONE_____

_____

SCHOOL_____ PHONE_____

TYPE OF CLASS_____

GRADE LEVEL_____

II. Please check one of the following:

_____I will provide my own transportation to the College Camp.

_____I will provide my own transportation to the college, but will need transportation from the college to the Camp.

III. Using the attached information sheets, please supply the following data for the Computer Based Resource Unit Print-Out (referred to on the General Information sheet). The information may pertain to a child in your class or one of your creation.

INDIV. OBJ. 2 ONLY	INTERESTS	DEVELOPMENTAL TASKS	READING LEVEL	AGE MA	AGE CA	PHYS. HAND.	LEARNING ENVRMT.

OVER

IV. We would like your imput concerning some of the areas to be covered in the institute. In order to help us determine the areas to be covered, please indicate your top four (4) preferences (1 high - 4 low) from the following list:

_____1. Orienteering (compass) How to read a map.

_____2. Fire building, extinguishing and foul weather fire starting.

_____3. Putting up tents and learning to use gas lanterns and stoves.

_____4. Knots and lashing

_____5. Arts and crafts

_____6. Nature and science

_____7. Social Studies

_____8. Math in the out-of-doors

_____9. How to plan an outdoor education program

_____10. Evaluation Skills

_____11. Outdoor games

_____12._____

_____13._____

_____14._____

Return to: Special Study Institute on Outdoor Education for the Handicapped
Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

PLEASE RETURN BY NOVEMBER 7, 1973

GENERAL INFORMATION

INSTITUTE LOCATION

The institute will be held at "Whispering Pines", the SUCB College Camp, located 73 miles south east of the College, just beyond the town of Franklinville. The 433 acres of land was once an old farm and the modern lodge has all the conveniences of home for approximately 40 people.

PARTICIPANTS

Forty participants have been selected to represent areas of the handicapped, including trainable and educable mentally retarded, physically handicapped, deaf, blind, and learning disabled children. Each participant will receive a stipend of $15 a day for a total of three days.

TRANSPORTATION

For those participants who are able to provide their own transportation, a map has been provided to assist you. Transportation from the College to the Camp will be provided for participants arriving in Buffalo by plane or who cannot provide their own transportation.

LODGING

Participants will be housed in the Camp's modern lodge. Adjoining the main room of the lodge, which is equipped with a fireplace, are a fully modern kitchen and the boys' and girls' dorms. The lodge fee is $2 per day and will be deducted from the stipend. Since the lodge is equipped with a modern stereo system, you may wish to bring records.

MEALS

Beginning with the Wednesday dinner meal, meals will be provided through Friday's lunch. A small meal charge will also be deducted from the stipend.

PRE-REGISTRATION FORM

Enclosed in this mailing is an institute pre-registration form. It is important that each participant complete this form and return on or before November 7, 1973 in order for the committee to finalize the institute program and begin processing the vouchers for your stipend.

Item I - information required for voucher.

Item II - please indicate how you plan to get to the camp. If you indicate a need for transportation from the College to the Camp, more information will be sent to you. For those participants planning to fly into Buffalo it is suggested that you plan to arrive at the College before 10:30 a.m.

and don't book a flight before 4:00 p.m. on Friday.

Item III - A sample Computer Based Resource Unit on Outdoor Education will be provided for each participant. One section of the print-out will be of particular interest to you if you supply the information requested for this item. Specific instructions are attached to the regristration form.

Item IV - your input will help us finalize the institute plans.

CLOTHING AND PERSONAL SUPPLIES

towel
change of underwear
a scarf or hat
jacket or coat
1 metal coat hanger (heavy)
pajamas
toilet articles
warm socks
camera & film
boots, sturdy shoes or sneakers
jeans or slacks
raincoat or poncho
sweater or sweatshirt
(musical instruments)?
sleeping bag or blankets, sheets and pillow case

EQUIPMENT FOR INSTITUTE ACTIVITIES

Participants are urged to bring any of the following items if available:

Flashlight (invert batteries)
handbooks
magnifying glass
jack knife
paper and pencils
binoculars
compass

FIRST AID KIT

Each participant should plan to bring a first aid kit to Camp. By utilizing a handful of common household items you can make an inexpensive and compact first aid kit. The kit contains the following items:

Metal Band-Aid box (approximately 3 x 3 x 1 inches) to be used to house:

Band-Aids (3 1" size and a few smaller sizes)
Safety pins (at least 3)
Razor blade (single edge)
Aspirin (small tin)
Needle (sewing type)
First Aid Cream
Matches (safety type)
Burn Ointment

EMERGENCY TELEPHONE NUMBER

You may wish to leave the College Camp telephone number with your family in the event they wish to reach you. The Camp number is (716) 676-5804.

VOUCHERS

Participants are required to sign a voucher for their stipend before leaving on Friday. Vouchers will be available on Friday afternoon. Remember, you must sign a voucher in order to receive your stipend.

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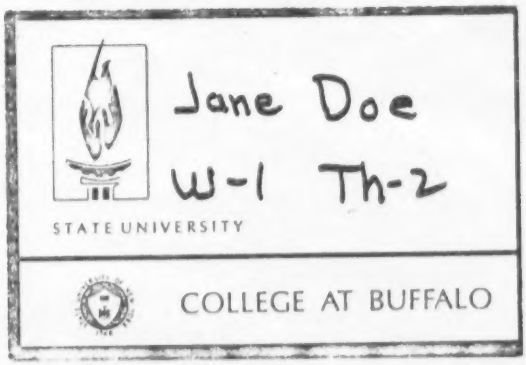
APPENDIX II

General Information

Name Tags

The numbers on your name tag are designed to direct you to your workshop groups throughout the institute. The letters represent the day while the arabic numbers represent the workshop groups.



During Workshop Session II, Jane Doe will work with group 1; during Session IV (Thursday) she will be part of group 2.

Groups

Wednesday, Session II

1) Ralph Dykstra 2) Herb Foster 3) Gerrie Navratil

Thursday, Session IV

	A) Arts & Crafts Dykstra	B) Nature & Science Sommers	C) Social Studies Navratil	D) Outdoor Games Foster
GROUP	A B C D	B C D A	C D A B	D A B C

(Throughout the day each group will rotate for each of the four workshop sessions as indicated above)

Meals - As part of the institute experience, each group will be responsible for preparing one or more of the meals. The following schedule will be followed:

	Meal	Group Responsible
Wednesday	Dinner	1
Thursday	Breakfast	2
	Lunch	3
	Dinner	1
Friday	Breakfast	4
	Lunch	3

Vouchers

Participants are required to sign a voucher for their stipend before leaving on Friday. Vouchers will be available on Friday afternoon. Remember, you must sign a voucher in order to receive your stipend.

APPENDIX III

MENU

Wednesday - Dinner

Grand Canyon Goulash

Assorted Cookies

Coffee Tea Sanka Milk

GRAND CANYON GOULASH (serves 36 - 54)

9 lb. hamburg
9 c (10 3/4 oz.) tomato soup
9 c (15 oz.) Macaroni - O's with Cheese
9 c (8 oz.) Whole kernal corn - drained
2 1/4 tsp. salt.
Onion powder to taste

Brown beef - add remaining ingredients and heat thoroughly.

Everyone had an opportunity to assist in the preparation of meals, with the help of the lodge's modern kitchen facilities as well as . . . . . .

BEST COPY AVAILABLE

MENU

Thursday - Breakfast

Orange Juice

Pancakes and Sausages

Butter Maple Syrup

Coffee Tea Sanka Milk

Lunch:

Hot Dogs on Roll

Potato Chips Green Salad

Catsup Pickles Relish

Coffee Tea Sanka Milk

Assorted Cookies

Dinner: Everyone cooks his own!

Pocket Stew Biscuits

Gingerbread and Applesauce

Coffee Tea Sanka Milk

POCKET STEW

In Aluminum Foil:

wrap ¼lb. patty of hamburg
½sliced potato
1 large sliced carrot
1 sliced small onion

Wrap tightly and cook in open fire!

MENU

Friday - Breakfast

Orange Juice

Scrambled Eggs Bacon

Toast & Jelly

Coffee Tea Sanka Milk

Lunch:

Tunaburgers on Bur

Fruit and Nut Surprise

Coffee Tea Sanka Milk

. . . . . .the not so modern facilities of natures "kitchen"!

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APPENDIX IV

FIRST AID KIT

By utilizing a handful of common household items you can make an inexpensive and compact first aid kit. In an emergency, this kit can provide temporary protection from serious injury or complications, and possible death. The kit contains the following items;

A Metal Band-Aid box (approximately 3x3x1 in.) to be used to house the items listed below:

Band-aids (3 1" and a few smaller sizes)

Needle (sewing type)

First Aid Cream (i.e. Johnson's)

Safety pins (at least 3)

Razor Blade (preferably a one edge type)

Matches (safety)

Can opener (GI type P-38)

Burn Ointment

Aspirin (small tin)

This kit can easily be expanded into a survival kit by adding the following items:

Compass

Nylon cord (8-10' in length)

Fish hooks (approximately 3 different sizes)

Mirror (small 2"x3" metal type or compact size)

Whistle

EXPLORING OLD CEMETERIES
AN OUTDOOR EDUCATION TECHNIQUE

By: Dr. Thomas J. Rillo
Indiana University

Dotting the landscape in a quiet, overgrown, and forgotten locations are many old cemeteries. The tombstones are weathered from the elements and some have fallen to lie in an undignified manner among the grasses and foliage which hide them during the spring and summer months. Others have been tilted from the growth of trees adjacent to them.

The inscriptions bearing names, dates of birth and death and in some cases a brief biographical statement, speak from the past to the individuals who are fortunate enough to discover such a veritable social studies resource.

Many historical events seem to come alive when viewed first-hand on the face of a sandstone, limestone, or granite tombstone. History can achieve "heightened vitality" (John Dewey's phrase) when teacher and class take to the field to explore an old cemetery. This can be a rich experience carrying with it a sense of personal achievement, an element of self-discovery, of creativity, the Eureka effect. A rich experience should be the culmination or fulfillment of other experiences.

It is for this reason that a class outlines the problem of cemetery exploration before embarking on the field trip. Specific assignments should be accepted by small groups. Study guides or questions can be formulated prior to the field trip. Classroom study in Social Studies should be closely correlated with the field activity if optimum learning results are to be realized. The following questions might be presented as problem solving situations:

1. Find the oldest tombstone.
   a. From what material was the oldest tombstone made?
   b. Where is the oldest tombstone located in the cemetery - Front? Rear?
   c. How old was the individual who died?
   d. Is there a footstone? How far is the footstone from the headstone?
   e. What kind of vegetation is growing on or near the grave?
   f. Are there any trees growing adjacent to or on the grave? How old are the trees?
2. Find the youngest tombstone.
   a. From what material was the youngest tombstone made?
   b. Where is the youngest tombstone located in the cemetery - Front? Rear?
   c. How old was the individual who died?
   d. Is there a footstone? How far is the headstone from the footstone?
   e. Are there any trees growing adjacent to or on the grave? How old are the trees?
3. When was the graveyard abandoned?
   a. How old is the biggest tree growing adjacent to a tombstone or on the grave?
   b. What is the date of the latest burial plot?

4. What is the average age of death in 10 year intervals? For men? For women? For children?

5. Do the designs and shapes of the tombstones change through the years? If so, how?

6. Is there a fence or fencerow surrounding the graveyard? If so, what kind of fence or fencerow?

7. Is there evidence of an epidemic? What kind of evidence?

8. Are there any unusual epitaphs on the tombstones? If so, why are they unusual?

These are just come of the many questions which can be utilized by a teacher and class for exploring an old cemetery.

The questions could be assigned to small groups either collectively or by sets of questions to individual groups. All groups should make tracings of the tombstones for further study back in the classroom. This can be accomplished by the use of crayon or dark pencil and brown wrapping paper or paper bags cut on the sides for maximum surface area. By rubbinggpencil or crayon on the paper, a reproduction of inscription or epitaph is made possible. Then taking these replicas back to the school will help make the experience a generative one, where students can intensify their analysis, develop a more concentrated scrutiny and make a more rigorous evaluation. A visitation to the County Court House for the purpose of delving deeper into historical records will enhance the concepts learned in the field. There are cemeteries within easy access to most school classrooms. Some are old and others are not quite so old. Nevertheless, each can provide a rich learning experience with an intensity to make it a memorable event in lives of school children.

Rillo, Thomas J., "Exploring Old Cemeteries, An Outdoor Education Technique", The Communicator (Journal of the New York State Outdoor Education Association) 4: 54-55, Spring 1973.

APPENDIX VI

NOW AND THEN

Have you ever

Carried firewood?
Gathered eggs from a nest?
Filled a water reservoir on a stove?
Cut wood with a cross-cut saw?
Watched a hen lay an egg?
Made sassafras tea?
Made cider?
Ground coffee in a hand grinder?
Watched wheat being thrashed?
Shucked corn?
Visited a blacksmith shop?
Watched a horse being shod?
Drawn water from a well?
Used a scythe?
Talked over a crank telephone?
Turned a cream separator?
Fed chickens?
Split stove wood?
Seen an ax sharpened on a grindstone?
Seen a field plowed with a horse-drawn plow?
Churned butter with a wooden churn?
Pitched hay?
Ridden a horse bareback?
Taken honey from a bee hive?
Gone barefooted for two weeks?
Milked a cow?
Trapped mice?
Made a willow whistle?
Slept out of doors overnight without a tent?
Saddled or harnessed a horse?
Rowed a boat?
Been lost in the woods?
Planted a tree?
Made soap?
Gone on a sleigh ride?
Baked bread?
Seen an animal slaughtered?
Made maple syrup?
Picked wild grapes?
Eaten green apples?
Gathered nuts?
Driven a team of horses?
Cleaned a fish?
Cleaned and plucked a chicken?
Shelled corn with hands?
Quilted on a patchwork quilt?
Stuffed a sausage?
Made a sling shot?
Gone hungry (from necessity) for a full day?
Skinned a rabbit or squirrel?
Trapped a skunk?
Rendered lard?
Cut off a chicken's head?
Chewed wheat for gum?
Smoked a bit of grapevine?
Pushed a wheelbarrow?
Curried a horse?
Cleaned and lighted a kerosene lamp or lantern?
Had your hair cut at home?
Made ice cream in a hand freezer?